PHILADELPHIA, DECEMBER 29, 1883.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON REMOVAL OF THE OVARIES FOR MENORRHAGIA — OÖPHORECTOMY FOR CONFIRMED MASTURBATION—OVARIOTOMY FOLLOWED BY ABSCESS IN THE ABDOMINAL WALL — CRIMINAL ABORTION—PROLAPSE OF THE UTERUS WITH PROLAPSE OF ONE OVARY.

Delivered at the Hospital of the University of Pennsylvania, October 3, 1883,

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REMOVAL OF THE OVARIES FOR MENORRHAGIA.

GENTLEMEN,—This patient has suffered from excessive menorrhagia and from severe ovarian pains and aches. She had been attended by many physicians, and at last she came to me to see what I could do for her. I tried various modes of treatment, but with very little benefit. I finally removed the ovaries, eleven days ago; and I bring the patient before you to-day that you may see her condition. She was very much reduced in strength before the operation, but she has not had a single bad symptom. The great majority of these cases that I see are so worn out that they are nothing but skin and bone, and they have not the resiliency and strength to endure the operation as they would have if not quite so much reduced. Yet I prefer a certain amount of emaciation, for then the opening in the abdominal wall is not so deep.

I now show you the wound at the end of eleven days. The operation was done with every antiseptic precaution. It was done under the spray; the instruments were immersed in a solution of carbolic acid, the sponges in the same, and every effort was made to obtain cleanliness in all respects. The gentlemen who assisted me had on clean clothing, and had washed themselves very carefully. I make it a point, although I take a bath every morning, to take a soap-bath on the morning that I am going to perform an ovariotomy. This wound has been dressed with gauze which had been kept for weeks in a solution of one part of crystallized carbolic acid to seven parts of glycerin. The gauze was laid directly on the wound, and over it was placed a pad of cotton which had been baked in the oven; this was secured by a flannel binder. The result has been perfect union.

The operation which was performed in this case was oöphorectomy, which literally means removal of the ovary. It is precisely the same as ovariotomy, but oöphorectomy has been restricted to the removal of ovaries which may or may not have any intrinsic disease, but which are extirpated in order to arrest menstruation. Ovariotomy is limited to the removal of ovaries which are diseased and usually much enlarged. The former operation has also been termed normal ovariotomy,—that is, removal of the normal ovaries for a specific purpose. In this case I did not remove the ovaries because they were diseased, but for the purpose of bringing on the change of life, which in the majority of cases it does. Occasionally menstruation persists after the removal of both ovaries. This is explained on the supposition that in these cases there has been a third ovary, or that all of the ovarian tissue has not been removed, a result which is likely to occur with inexperienced operators.

When do we perform oöphorectomy? It is often employed in pernicious menstruation, which is a generic term covering a great deal. If there is a fibroid tumor of the womb producing an excessive menstrual flow which cannot be checked, we would call such a condition pernicious menstruation. Sometimes epilepsy occurs at the menstrual period, or just before the period; the woman will have hallucinations, or there may be ovarian insanity. These come under the same label of pernicious menstruation. At other times the woman is bedridden, suffering severe pain from the congestion and enlargement of the ovaries. This is another example of the same condition. By the removal of the ovaries relief from these symptoms is in the great majority of cases secured. The operation is still young, and, I think, has been abused, and is in danger of being abused. It requires the utmost caution on the part of the surgeon to decide whether or not to remove the ovaries. The extirpation of these organs does not unsex the

woman in regard to her appearance, to her feelings, or to her place in society; it simply prevents her from having children. There are several cases reported in which both ovaries have been removed by careful surgeons, and yet the woman has, months or years afterwards, given birth to a child. This has most likely been due to the presence of a third ovary, together with its Fallopian tube. I have never met with such a case, but there are numerous instances in which a third ovary or ovarian structure has been found in the broad ligament, apart from the two ovaries.

REMOVAL OF THE OVARIES FOR CONFIRMED MASTURBATION.

Three weeks ago I had this patient before you, and told you before she came in what a sufferer she had been, and told you that I should perform oöphorectomy. The operation was done eighteen days ago. In this patient there was considerable fat, so that, in order to obtain a sufficient opening, the incision had to be extended high up. On the other hand, I do not like to have the patients too thin, because loss of flesh means loss of vital power, and such women are not so likely to survive the operation. There has been since the operation an amelioration of the symptoms, and I think that she will continue to improve. Since last May it has been necessary to employ a catheter. I think that in time she will regain control over her bladder, and this difficulty will be overcome. It is a nerve-symptom, and is due to contraction of the muscular fibres surrounding the urethra.

The operation of oöphorectomy is performed in the following manner: The spray-producer is set about six feet from the patient and the spray directed over the wound, not so as to drop into the wound, but so as to go directly over it and carry away or destroy any germs that may fall from the air. The instruments are placed in a tin pan and covered with a five-per-cent. solution of carbolic acid. Just before the operation, hot water is added, reducing the strength of the solution to two and a half per cent. The sponges are put into a warm solution of the latter strength. The incision is made in the linea alba with considerable boldness until the peritoneum is reached. It is recognized by the overlying fat. All bleeding points are caught with pressure-forceps, and there may be a dozen of these dangling from the wound at one time. The rule is to stop all bleeding before the peritoneum is opened. A great deal of caution must be exercised in opening the peritoneal cavity. This operation is more difficult than ovariotomy, for the intestines are immediately under the wound. If an intestine were glued to the peritoneum, it might readily be opened. This accident has repeatedly happened. Almost all the gentlemen who perform oöphorectomy have opened the intestine. So far I have not had this accident occur. I open the abdominal cavity in this way: When I get to the peritoneum, which I recognize by its blueness, thinness, and tendency to bulge into the wound, I catch hold of it with a tenaculum. I take a very superficial hold of it, raise it up, and, cutting laterally, make a little nick on one side. In this way I make a minute opening and can see whether or not I am in the abdominal cavity. I then enlarge the opening with a director and scissors, or, as I consider the better way, introduce a finger and cut on it. Having done this, two fingers are passed in, and the position of the fundus of the womb is determined. The fingers, one on each side of the broad ligament, are then passed down, and the ovary is caught between them and brought far enough up to be grasped with the forceps. Sometimes the ovary eludes the fingers; it then has to be caught with the fenestrated polypus forceps. The ovary having been brought to the external wound, the broad ligament is transfixed with a double thread low down, and ligatured on each side. Then the ends of one ligature are brought entirely around the stump and again tied. The stump is caught with a small pair of forceps and the ovary removed. The pedicle is next examined, to see if it is sufficiently long, and whether there is likely to be any bleeding. The same thing is done with the other ovary. I usually pass a sponge into the cavity of the abdomen, to catch any blood that may escape. The ovaries being removed, a small sponge, held by forceps, is passed into Douglas's cul-de-sac, to remove any blood that may be there. In closing the abdominal wound, threads eighteen inches long, armed at each end with a needle, are used. These are kept in a five-per-cent. carbolic acid solution. They are passed from within outwards. This is done for three reasons: 1, if passed from the outside and the patient should happen to cough, the intestine

may be wounded; 2, if the needle become blunted, it may strip off the peritoneum without penetrating it; and, 3, as the peritoneal is the vulnerable surface, it is desirable to have the stitches placed there as neatly as possible. The needles are passed about one-fourth of an inch from the edge of the peritoneum, and about the same distance from the edge of the skin. The mistake which beginners make is to include too much skin. I used to include half an inch. If this is done, the edges do not come into close coaptation, but pucker. While the stitches are being inserted, a sponge is kept in the abdominal cavity, directly under the incision, to prevent blood from getting into the cavity. When all the stitches are in position, the ends on one side are brought together, twisted into a cord, and grasped with forceps. The same thing is done on the opposite side. One finger of each hand is placed in the wound, and the sutures separated. A careful examination is then made to see whether or not there is any collection of blood in Douglas's pouch. All sponges are then removed, and the edges are brought together by pressure, in order to chase out the air, and the sutures are rapidly tied. After tying, the ligatures are cut off, leaving ends an inch and a half long. The wound is dressed with carbolic acid and glycerin, as before described.

The after-treatment consists in giving no food for twenty-four hours. Milk in tablespoonful doses is then cautiously allowed. I tell the patient that if she feels inclined to break wind she is not to restrain herself on account of the presence of any one in the room. The escape of wind from the anus is, in these cases, a most welcome sound. It indicates that the intestines are not paralyzed, that there is no peritonitis, and that there is to be no collection of air in the intestine. Tympanites is in these patients a very distressing symptom, and sometimes requires the introduction of the catheter into the bowel. (The patient was now removed.)

This, gentleman, was the case of excessive masturbation which I showed you on a former occasion. I told you that to a certain extent the operation was an experiment. She has improved, and is now more calm and placid. I feel pretty sure that if I could have her under my direct control for a month I should cure her of this habit. I shall watch the case with great interest, and shall report the result in a few weeks.

OVARIOTOMY, WITH ABSCESS OF THE ABDOMINAL WALL.

This third case is one of ovariotomy on which I operated three weeks ago. The wound has healed in every respect but one. This occasionally happens in spite of antiseptic precautions. I refer to the development of little abscesses along the suture-tracts. These heal up rapidly. I used to attribute their formation to the inclusion of the fibres of the recti muscles in the suture, but I do not now think that this is the true explanation. The abscesses are probably due to the bruising of the parts by the pressure-forceps. All of these cases have recovered without a bad symptom. This patient has lost considerable flesh, and, although only 48 years old, looks much older. These furrows about the forehead and lines about the eye are characteristic of the *facies ovariana*. In fibroid tumors this expression of countenance does not exist. There is usually then a brown discoloration of the skin. A woman with a fibroid tumor has also a tendency to become fat, or, at any rate, she is in pretty good condition, and does not emaciate like a case of ovarian tumor. Strange as it may seem, the loss of blood tends to the production of fat, but the fat is of a flabby kind. In some parts of Europe it is the custom of butchers to bleed the calves in order to render the veal white and fat.

In this patient, both ovaries were diseased, and were accordingly removed. Here is a point which is an indication that both ovaries were affected. She has, as you can see, considerable hair on her chin and upper lip. In women past the climacteric, whose ovaries are shrivelled and shrunk, a beard develops; but here is a comparatively young woman who should not have a beard. This is due to the condition of the ovaries.

I here show you the temperature-chart of this woman. The evening after the operation, the temperature was 98°; the next morning, 100.6°. It then continued normal until the abscess developed, when it ran up to 100°. The disturbance has not been as great as would ordinarily follow the amputation of the little finger. She was kept twenty-four hours without anything to eat. Sometimes I give nothing for thirty-six hours, except a little cracked

ice, and, if necessary, an occasional teaspoonful of good brandy or whiskey. She then received a tablespoonful of milk every two hours. The next day the quantity was increased to two tablespoonfuls, and the next day to three tablespoonfuls every two hours, the quantity being gradually increased. She has now an excellent appetite. The loss of flesh is due to the abstraction from the blood of the rich constituents of the fluid. I have known an ovarian cyst after being tapped to fill up at the rate of a pound a day, which meant the loss of nearly one pound of blood each day.

She is now taking strychnia, in the form which we term the "lemonade iron." It is prepared as follows:

℞ Strychninæ sulph., gr. ¾;
Tinct. ferri chloridi, ʒiv;
Acidi phosphorici dil., ʒvi;
Syrupi limonis, vel simp., q. s. ut ft. ʒvi. M.

Sig.—A dessert-spoonful after each meal.

This preparation of iron is very good for children. I give one minim for each year of age. Iron in a fluid form is, I think, more readily assimilated than when given in pills. The objection to the tincture is that it injures the teeth. The precaution should be taken to have the medicine well diluted and taken through a glass tube and the teeth well brushed with soda and water.

CRIMINAL ABORTION.

Before bringing in the next case, I want to tell you something that happened to me lately. I have often told you to be cautious in passing the sound, so as not to produce abortion. You will often be urged by unmarried and married women to bring on a miscarriage for them. I urge you not to accede to their wishes. I do this for two reasons: first, because it is a criminal act and a great sin before God and man; and, second, because you are liable to get into trouble. Years ago, I have had persons approach me in this way, but I thought the time for that had gone by. Night before last, a young woman came into my office and said she wished to see me. I told her that if she wanted an examination I could not make it then, but that she would have to come in the morning. She returned yesterday morning and told me that she had gone two months without seeing her monthlies, that she knew she was pregnant, and that she wanted me there and then to bring on an abortion. I was very angry, and asked her who had sent her to me. She had heard that I treated female complaints, and thought that I would help her. I explained to her that it was a great sin. She admitted that, but said that she was going to have it done. So I bade her "good-morning."

PROLAPSE OF THE UTERUS WITH PROLAPSE OF ONE OVARY.

This is a patient that I have not seen before. She states that she is 28 years old, has been married nine years, and has had four children, the youngest of whom is two years old. She complains of severe bearing-down pain; she at times becomes very melancholy, has pains in the left side, and lifting tends to bring on the monthlies. I have an idea as to the nature of the trouble. I have seen analogous cases, and have frequently found two conditions,—retroversion of the uterus, and prolapse of the ovaries. In one case I slipped the ovary up and introduced a pessary, and the patient immediately improved and became brighter. In a short time the ovary fell down again, and she came back with a suicidal tendency. After the ovary was pushed up, she again got better, but now she is much worse; and it is a question whether or not it would not be best to remove the ovaries.

This patient says that she passes a great deal of water, and that it is of the color of spring-water. This would seem to indicate a nervous element. Examining per vaginam, I find a tear of the cervix and some enlargement of the glands of Naboth. There is no retroversion, the womb being in a good position of anteflexion. There is, however, prolapse of the anteflexed womb. The left ovary is prolapsed, but I cannot feel the right ovary. If I were to press on it and squeeze it, as I might a cherry-stone, between my fingers, it would slip away, and she would jump as though I had stabbed her with a knife. I was partly right and partly wrong in my supposition.

She has no retroversion, but the womb is prolapsed and presses upon the nerves. She also has prolapse of the ovary. The sound gives a measurement of three and a quarter inches. If the laceration were closed, the measurement would be at least three and a half inches. There is subinvolution, and I have no doubt that there are within the cavity fungous vegetations.

She has a dislocated ovary, which is

larger than it should be. The congestion of the ovary has acted secondarily on the womb. As I have often said to you, the word "woman," or *womb-man*, is a misnomer. She is a woman because she has ovaries,—not because she has a womb. A woman who is born without ovaries remains a child and undergoes no development, while, on the other hand, many a woman is born without a womb and yet has all the development and attributes of womanhood. The scientific label of woman should be "ovary-man."

The congestion of the ovaries causes an interference with the circulation of other parts; the womb is enlarged and prolapsed, and presses upon the ovary, giving pain. If the ovary were a little lower than it is, there would be another symptom; *i.e.*, when the fæces were at all hard and there was straining when the bowels were moved, there would be pain radiating down the leg. She does not have much pain at this time, but feels a chill from her head to her feet. In reply to a question, she tells me that there is pain in the marital relation. The pain would be worse if the ovary were in the median line in Douglas's pouch, but it is in the lateral pouch, and is not so much impinged upon.

What shall we do for her? The proper plan is to give some remedy which will lessen the flow of blood to the ovaries. I shall give her ammonium chloride in combination with ammonium bromide, as follows:

℞ Ammonii chloridi, ʒiv;
Ammonii bromidi, ʒiv;
Infus. gentianæ comp., ʒvi. M.
Sig.—A dessert-spoonful before each meal.

If it prove too irritating for the stomach, it may be given after meals, in water. She will also take ten drops of tincture of digitalis, three times a day. This, besides being a heart-tonic, lessens the amount of blood going to these organs. At the end of a week we shall be able to give the iron preparation before mentioned. She is not now in a condition to take iron. It is best to prepare her for the iron by the use of a purge and the administration of such remedies as the chloride of ammonium. With the iron she will receive strychnia. Sometimes iron cannot be given because it increases the flux of blood. She will also need a properly-fitting pessary. I think that, if the melancholy is not due to incipient insanity, she will be greatly improved.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF MEDICAL CHEMISTRY.

BY WILLIAM H. GREENE, M.D.

THE CHEMISTRY OF URINE.

PARAXANTHINE.—By operating on large quantities of urine, G. Salomon has succeeded in extracting a new matter which he calls *paraxanthine*. The urine was collected in vessels containing a small quantity of nitric acid to prevent ammoniacal fermentation, and, in quantities of twenty-five to fifty litres, was rendered alkaline with ammonia. 0.5 or 0.6 gramme of silver nitrate per litre was added, and the dirty-white precipitate collected and washed as long as the washings contained chlorides; it was then suspended in water and decomposed by hydrogen sulphide, and the filtered liquid evaporated until an abundant deposit of uric acid was formed. The remainder of the latter acid was precipitated by an excess of ammonia, and the new filtrate obtained, after standing two days, again precipitated by silver nitrate. The compound of silver nitrate and hypoxanthine was thus separated, while xanthine and the new substance remained in the mother-liquor, from which they were precipitated by the addition of ammonia. This last precipitate was decomposed by hydrogen sulphide, and the clear liquid treated with ammonia, evaporated to small bulk, and again filtered. On crystallization, xanthine separates first, and from the strongly concentrated mother-liquor the paraxanthine is deposited in large colorless hexagonal tables. It is slightly soluble in cold water, much more soluble in hot water, and insoluble in alcohol and ether; the solution is neutral. No hydrochloride could be obtained, but the substance combines with the alkaline hydrates, forming microscopic crystals, which are precipitated when potassium or sodium hydrate is added to a concentrated solution of paraxanthine. Successive treatment with nitric acid and caustic soda produces a pale-yellow color. Weidel's test (evaporation with chlorine water and a trace of nitric acid, and contact of the residue with ammonia vapor) develops a rose color. From twelve hundred litres of urine only 1.2 gramme of paraxanthine was obtained, and new experiments must show whether this substance, to which the formula $C_{15}H_{17}N_9O_4$ is

assigned, pre-exists in the urine or is formed during the manipulations.

UROSEÏNE.—This substance is the cause of the rose color assumed by many specimens of urine several minutes after the addition of strong hydrochloric or dilute sulphuric acid. Nencki and Sieber have never found it in normal urine, but in about ten per cent. of pathological specimens; these represented the most varied affections,—diabetes, chlorosis, nephritis, typhoid fever, carcinoma of the œsophagus, etc. The diet appears to have no influence on the appearance of this substance in the urine: in the same case it may disappear for a few days and its elimination be resumed as before. Its detection is not difficult. To fifty or one hundred cubic centimetres of urine, five or ten cubic centimetres of sulphuric acid diluted with three times its weight of water are added, and then a few cubic centimetres of amyl alcohol. The tube is agitated, with precautions that the mixture may not form an emulsion, and the alcohol, dissolving the uroseïne, separates with a bright rose color. The solution causes a spectroscopic absorption-band between D and E, and concentrated solutions allow the passage of only red and orange rays. Ether, chloroform, benzol, and carbon disulphide do not remove uroseïne from the urine. Ammonia and solutions of the alkaline hydrates and carbonates decolorize the solution of this coloring-matter, but the color reappears on the addition of an acid. Powdered zinc agitated with the acid solution bleaches the color in the same manner, but it is restored on exposure to the air. Uroseïne is unstable, resembling in this property the red coloring-matter of the retina: urine which has assumed a rose color by the addition of an acid is spontaneously decolorized after standing a few hours; after evaporation of the alcoholic or aqueous solution only a resinous brown matter remains. However, by the following process a solution is obtained which may be kept for several weeks: a few litres of the urine are rapidly concentrated to half the volume in flat dishes on a water-bath; after cooling to 30° C., hydrochloric acid is added, and the color is fixed on clean wool, sodium acetate being added if necessary. The wool is then carefully washed in water, dried in the air, and digested on a water-bath with absolute alcohol containing a little sulphuric acid. The alcoholic solution so obtained is the purest and most stable which the authors could prepare.

LACTIC ACID.—Nencki and Sieber have found that even large doses of lactic acid —twenty grammes of sodium lactate per twenty-four hours—are completely oxidized in the human body in glycosuric conditions as well as in health. This observation is entirely contradictory to the statement of a large number of experimenters that normal human urine contains lactic acid. The authors have consequently made a critical examination of all the publications on the subject, and conclude that, except in two cases, one of which was acute phosphorus-poisoning and the other trichinosis, in which the lactic acid was isolated from the urine and its zinc salt analyzed, none of the analyses warrant the conclusion that lactic acid exists in human urine. To a case of diabetes, in which from 400 to 600 grammes of glucose were eliminated in twenty-four hours, and in which it might consequently be supposed that the oxidizing powers of the system were very low and that no foreign matter would be burned, twenty grammes of neutral sodium citrate and sodium lactate were administered per day, and the urine contained neither citric nor lactic acid. On the contrary, injections of benzol were followed by the appearance of notable quantities of phenol in the urine. In a case of leucocythæmia, in which the daily excretion of uric acid was increased to one gramme, not only could no lactic acid be detected in the urine, but the patient was still able to oxidize twenty grammes of sodium lactate per day. These results are important in relation to the pathology of diabetes and other affections in which we would be tempted to conclude that no such oxidations could occur.

ACETYL-ACETIC ACID.—The violet or red color produced by the addition of ferric chloride to urine is attributed by Tollens to the presence of acetyl-acetic acid, and Rudolf von Jaksch has confirmed the opinion. By agitating with ether urine acidulated with sulphuric acid, shaking the decanted ether with water and cupric hydrate, rapid evaporation of the solution in a vacuum, and extraction of the residue with absolute alcohol, Jaksch obtained a copper compound the analysis of which gave the figures required by the compound of acetyl-acetic acid. The

salts of zinc, barium, and ammonium were prepared from urine in the same manner, and the results fully sustained the indications furnished by the copper compound. These salts decompose rapidly in solution, as does also the free acid, which disappears from fresh urine after standing twenty-four hours, and more quickly if the urine be warmed.

DETECTION OF GLUCOSE.—Gautrelet remarks that we may readily distinguish between a reduction of the cupro-potassic solutions by glucose and a similar reduction by uric acid. The reduction by glucose takes place as soon as the liquid begins to boil, and is not increased during cooling. If, however, a reduction begins when the tube is withdrawn from the flame, and continues during cooling, it is to be attributed to uric acid.

DETECTION OF ALBUMEN.—Arthur R. Haslam finds that a very dilute solution of albumen, to which a little common salt is added, is precipitated by ferric chloride, and proposes the use of the latter for the detection of albumen in urine. The test is worthy of no confidence, for the author himself directs that acetic acid should first be added to the urine in order to prevent the precipitation of the ferric chloride by the phosphates. The precipitation of albumen by ferric chloride and by ferric acetate is a long-known fact, but the precipitate is soluble in an excess of the reagent.

ESTIMATION OF UREA.—L. Hugounenq estimates urea by heating five cubic centimetres of urine, previously filtered through animal charcoal, with fifteen to twenty cubic centimetres of water to 190° C. in a sealed tube. The quantity of ammonia formed is then determined by the aid of a normal sulphuric acid containing forty-nine grammes of sulphuric acid per litre. The required number of cubic centimetres multiplied by six gives, in grammes, the quantity of urea in a litre of urine. This method is not applicable to urine containing sugar; that containing albumen must first be boiled. The process is quite as troublesome as that of Bunsen, over which it possesses no advantage.

BILE-PIGMENTS AND ACIDS.

E. Drechsel proposes the substitution of phosphoric acid for sulphuric acid in Pettenkofer's reaction. The solid substance to be tested, together with a grain of sugar, is dissolved in one to three drops of a mixture of five volumes of syrupy commercial phosphoric acid and one volume of water. The test-tube is warmed by immersion in boiling water.

According to St. Capranica, solutions of bilirubin and biliverdin in alcohol, ether, or chloroform assume, after the successive addition of bromine, water, chloric acid, and iodic acid, a green color which deepens to blue and violet, then changes to orange, and finally disappears. The conversion of bilirubin into biliverdin is effected in neutral solutions by the action of light, and the former compound may so be distinguished from the hematoidin of the corpora lutea, whose solution is decolorized by exposure to light and does not become green. Whether the hematoidin of old apoplexies is identical with that of the corpora lutea is still doubtful. St. Capranica considers it improbable that the bile-pigments are derived from the coloring-matter of the blood, notwithstanding that they are related by many properties, as by their reduction, which in each case yields hydrobilirubin. Solutions of the latter do not become red on addition of bromine-water, but are colored violet-red by the chloric and iodic acid. A sharper test consists in agitating an ethereal solution of hydrobilirubin with aqueous iodic acid, which so acquires a violet-red color.

TIME REQUIRED FOR STOMACHIC DIGESTION.

E. Jessen has made some experiments on the time required for the digestion in the stomach of several articles of diet. The stomachs of the persons submitting to the experiment were emptied by the aid of a pump, and one hundred grammes of raw or cooked meat mixed with three hundred cubic centimetres of water were introduced. The experiment was considered ended when the stomach-pump could remove no particles which exhibited the microscopic appearances of muscular fibre. The results were as follows:

Raw and finely-cut beef,			2	hours.
Partially-boiled	"	"	2½	"
Well-boiled	"	"	3	"
Rare roast	"	"	3	"
Well-roasted	"	"	4	"
Raw mutton,			2	"
Raw veal,			2½	"
Raw pork,			3	"

The digestion of milk was examined in the same manner, a quantity of milk being used of which the percentage of nitrogen was equivalent to that of one hundred grammes of beef.

602	cubic centimetres	raw	cow's milk,	3½	hours.
602	"	"	boiled	"	"	4	"
602	"	"	sour	"	"	3	"
675	"	"	skimmed	"	"	3½	"
656	"	"	raw goat's milk,			3½	"

A SUGAR-LIKE BODY EXTRACTED FROM THE LUNGS AND SALIVA OF PHTHISICAL SUBJECTS.

A. G. Pouchet has by a somewhat complicated process extracted from the saliva and lung-tissue of consumptives a carbohydrate having the composition $C_{12}H_{20}O_{10}$. It is an amorphous white powder, the aqueous solution of which rapidly becomes brown and mouldy. It does not reduce Fehling's solution, but acquires reducing properties by boiling with acids. It is feebly dextrogyrate. It produces a cloudiness with silver-nitrate solution, and soon afterwards a separation of metallic silver. It is distinguished from glycogen by its reactions and by its perfect solubility in water.

BORIC ACID AS A FOOD-PRESERVATIVE.

J. Forster has made some experiments on the influence of boric acid on digestion. Starting with the assumption that the most perfect digestion is that which furnishes the least quantity of solid excrements, he weighed the dried excrements, estimating also the nitrogen, of an individual who was kept on a constant diet of eggs and milk. During certain periods of two or three days this food was administered pure, and during similar periods with the addition of from 0.5 to to three grammes of boric acid. The results indicated that the boric acid increased the quantity of dry excrements and nitrogen. Some experiments seemed to show that the proportion of albuminoid matters contained in the excrements was also augmented by the ingestion of boric acid. The author remarks that, should these results be confirmed by more extended experiments, boric acid must no longer be highly esteemed as a food-preserver, and that particularly must attention be given to the fact that this substance is frequently added to milk intended for the use of infants and invalids.

FIBRIN AND FIBRINOGEN.

Denis distinguishes three modifications of human fibrin: 1st, *concrete modified fibrin*, obtained by whipping arterial blood or by diluting with water venous blood received in a solution of sodium sulphate; this is insoluble in solutions of common salt, and identical with ordinary fibrin; 2d, *concrete fibrin-globulin*, from venous blood coagulated by rest; this is swollen and gelatinized by ten-per-cent. salt solution; 3d, *concrete pure fibrin*, formed by beating venous blood, perfectly soluble in salt solutions. The difference between these varieties, which has been denied by Eichwald, is in the main sustained by Hammarsten, who considers the first-named insoluble variety as the type. The gelatinization, or the second variety, may be produced from fibrin by the addition of a large proportion of white blood-corpuscles. The third and soluble variety, which Denis obtained from human blood by adopting special precautions, Hammarsten has prepared from the fibrinogen of horses' blood by taking advantage of a characteristic but not entirely typical property of that substance, by the addition of a large quantity of paraglobulin or an insignificant amount of free alkali; carbonic acid retards the change, but does not exert any modifying influence on the resulting fibrin. The later researches of Hammarsten indicate that, besides the necessary salts pointed out by Schmidt, only two bodies are required for the production of fibrin: they are fibrinogen and the fibrin ferment; paraglobulin may increase the production, because it opposes certain of the influences preventing coagulation of the natural fibrinogen solution. Hammarsten's estimations of the fibrin yielded by solutions containing no paraglobulin agree perfectly with those of Schmidt and Frédéricq; the fibrinogen always yielding less fibrin than would be required by its weight,—from 61.63 to 94.1 per cent. Fibrinogen coagulating at 56° C. disappears rapidly from its solutions, which then contain a new globulin, precipitated by magnesium sulphate and more readily by sodium chloride than is paraglobulin; this globulin coagulates at 64° C., and exists also in the serum of blood. By warming a fibrinogen solution to 50°–60°, an insoluble substance coagulates, and the liquid then contains the globulin coagulable at 64°. The insoluble substance contains more nitrogen than does fibrinogen; the soluble substance consequently containing less. Hammarsten does not

consider these products to be formed by decomposition, which would otherwise yield them in constant proportions. Agreeing with Denis, he believes that there is a soluble intermediate fibrin formed during the coagulation, and that this is at least partly, and perhaps by oxidation, converted into globulin.

SUCCESSFUL OPERATION FOR VESICO-VAGINAL FISTULA.

BY HILLARY RYAN, M.D.,

Caldwell, Texas.

OF all the ills that flesh is heir to, I know of none in which there is no danger to life, and but little to the general health, that entails on the poor sufferer so much discomfort and mortification as vesico-vaginal fistula.

The physical discomfort is great, but the mental suffering is greater. The constant dribbling of urine keeping the parts wet and excoriated, with the offensive smell, produces a condition which alone is sufficiently painful to elicit the sympathies of all connected with the unfortunate sufferer. But when we remember that the organs that a modest woman desires to be kept from the thoughts and attentions of those with whom she is surrounded are constantly kept vividly in her own mind, and, as she necessarily supposes, in the minds of those with whom she is associated, her chagrin excites our warmest sympathies. After reading the history of the many efforts to cure this distressing affliction, we feel surprised that more had not been done centuries ago than was done; and we are further surprised that better success did not crown the efforts at first of those eminent surgeons that did attempt the relief of this unhappy condition. Dr. J. Marion Sims says that he operated on three cases about forty times without making a perfect cure. The operation in the hands of Dupuytren, Jobert, and Velpeau was not encouraging.

Yet, with all those failures, the operation can now be performed on healthy subjects with perfect success, by following out the principles so clearly laid down by the well-known writers on the subject. Concerning the *technique* of the operation, we notice that Gosset* recommended gilt silver-wire sutures. Hayward† advised the very free vivifying of the edges of the fistula. Mettauer‡ recommended lead wire because it could be tightened.

Dr. J. Marion Sims, in an elaborate article published early in 1852,§ advised that the sutures shall not enter the bladder, but pass through the edges of the fistula before entering the mucous membrane of the bladder.

These principles are all collected in an excellent article‖ by Dr. Walter F. Atlee, who, with them, gives the additional advice to pass the sutures out some lines from the mucous membrane of the bladder, so as to make a ridge in the bladder when the fistula is brought together, instead of a sulcus.

In Dr. Atlee's operation a broad raw surface is made in the vagina, fully one-third of an inch from the edge of the fistula, and the sutures being passed in this way, at some distance from the mucous membrane of the bladder, the orifice is closed by twisting the wires together, as usual.

Dr. Atlee justly claims for his operation that there is a contact of surfaces instead of edges, and that a crest projects into the bladder instead of the depression into which the urine settles and finds its way into the sutures. The method by which this has been accomplished is readily understood.

Dr. Myers, of Lyons Station, sent to me for operation Caroline Jackson (colored). She was 33 years old, of medium size, stout, and had given birth to six children,—the last one in November, 1881. This had been a tedious labor, and had resulted in vesico-vaginal fistula. On examination, on the 5th of May, I found the fistula about half an inch in front of the mouth of the womb. It was large enough to admit my index and middle fingers. The right proximal edge was somewhat bound down to the os pubis, so that the distal and proximal edges would not meet well in apposition.

Before preparing her, or rather to prepare her, for the operation, I introduced into the urethra sponge tents, so as to dilate the urethra and raise the vagina as much as possible from its attachments. I passed them directly into the bladder. When

* Lancet for November, 1834.

† American Journal of the Medical Sciences, August, 1838.
‡ Ibidem, July, 1847.
§ Ibidem, January, 1852.
‖ Ibidem, January, 1882.

they enlarged, I tore off the end in the bladder through the fistula, and withdrew it, as it made her quite sore. I waited a few days before introducing a larger one. By this means I lengthened the proximal edge so that it would meet the distal pretty well.

Having prepared her in the usual way by purgatives, on the 28th of May, assisted by Drs. Darr, Womach, Mathews, Cearnals, and Armstrong, I proceeded to operate as advised by Dr. Walter F. Atlee in the article referred to, except that I had her nearly on her elbows and knees.

We placed her on a table before a southwest window at two o'clock P.M., her body raised by bedquilts rolled up and placed under her abdomen so as to raise her hips until her knees would rest on the table. While in this position, with her shoulders a little raised from the table, her right hip a little more elevated than her left, the perineum well held back by a Nott's speculum used as a Sims's, and the vulva held apart by two spatulas, the patient being fully under the influence of chloroform, I vivified the vagina and the edges of the fistula with a Bozeman's knife, with the aid of the bistouries and scalpels such as are usually found in a pocket-case, for fully half an inch all around the fistula, going down on the edges to the mucous membrane of the bladder. This stage of the operation was tedious and troublesome.

There was but little hemorrhage, and that was easily controlled by ice placed on the parts.

After the arrest of the hemorrhage we commenced at the right side, where we found the worst adhesions and the most difficulty in making the ligatures meet and pass. We used a short, curved needle, armed with a silk thread tied at the end, in which was looped a silver wire. The needle was passed into the vagina one-third of an inch from the edge of the vivified surface, brought out in the middle of the raw surface, passed into the distal side opposite the place it was brought out of the proximal edge, and carried out one-third inch from the vivified edge on the distal side, just in front of the mouth of the womb. The silk was then drawn through, drawing the silver wire with it, until the wire, which was eighteen inches long, was half through. The ends were now fastened together and another stitch made in the same way, until we completed the twelve which it took to reach the left side. We then again commenced, but on the right side, and with a fenestrated ball-forceps passing the wire through the fenestræ until the points of the forceps were within half an inch of the vagina, when I twisted the wires until I brought the parts together. I continued in like manner with all until the parts were well drawn together; but, upon close examination, I found that I had not commenced close enough to the edge, and so I put in another stitch at the right side. I then fastened the wires together with a piece of dressed buckskin. Having replaced her on her back, I introduced a silver catheter into the bladder, and with a Davidson's syringe washed out the bladder with warm water, and then the vagina. I then placed cotton-wool, saturated with laudanum, in the vagina over the fistula. Then, the operation being completed, I introduced a gum catheter into the bladder and placed her on a mattress.

28th. Morning. Temperature 101°, and badly nauseated. I thought the nausea was possibly from the chloroform and a dose of morphine given her. I gave her ice *ad libitum*, washed out the bladder and vagina, and replaced the cotton and laudanum. Iced milk-whey for diet.

29th. Evening. Washed out the bladder and vagina with warm water, and replaced the cotton and laudanum.

30th. Temperature 100°. No nausea. I washed out the bladder and vagina, and renewed the cotton and laudanum.

31st. Temperature normal. No pain in any part. Washed out the bladder with warm water; renewed the cotton and laudanum; changed catheter. At every dressing the catheter was cleansed, but we found it necessary to replace with a new one every day or two.

On the 1st, 2d, 3d, 4th, and 5th of June the treatment was the same, except her diet, which was of wheaten bread, tea, and milk. No other diet allowed; but she was allowed tea or milk as she chose.

6th June. When we used the warm injection in the bladder, blood issued from the vagina. We were greatly troubled, fearing that the operation was not a success; but when the woman who nursed her came, she suggested that it was her "sickness" on her. We examined the parts as best we could, and could see noth-

ing to indicate ulceration or that the stitches had given way. We still used the same washings and opiate applications. Her menses lasted until the 10th, then ceased. On the 11th I ordered an enema to move the bowels, and it acted well.

15th June. I was summoned to Lampasas on professional business. Before leaving, I cut off the wires at the vulva, which she thought I "ought to have done at first," and let her walk around as she pleased. I was detained at Lampasas three weeks. On returning I found our patient well.

At this visit I found five of the sutures on the left had grown out. I cut off the distal end of the others and carefully drew them out also. In two weeks more, one could not have told where the fistula had been. I think it wholly unnecessary to leave the sutures in so long, but in this instance I feared sexual intercourse, which the wires prevented.

I think that this case demonstrates the truth of the assertion of Dr. Atlee that, if broad, raw surfaces are fastened together by sutures, not entering the bladder at all, the sutures, of silver or gilt silver, being introduced so as to make a crest in the bladder instead of a depression, and a contact of surfaces in place of edges, the operation will be a success no matter what kind of instruments you use. For in this instance, with the exception of a Nott's speculum used as a Sims's and a Bozeman knife, I had nothing but what was improvised for the occasion. I may have been extravagant with wire,—for I used up about twenty feet,—but the subsequent progress showed that no case could have done better.

AN EXAMINATION OF THE FÆCES OF TWENTY PERSONS RECEIVING INUNCTIONS OF COD-LIVER OIL.

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AND

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IN a study of the fæces of starch-fed infants* one of us observed a specimen in which there was present a very notable amount of oil-globules. Upon inquiry, it was found that the child in question had been receiving inunctions of cod-liver oil.

The same coincidence was a second time noted, and the following series of experiments was then instituted.

The fæces of fourteen infants, in fairly average health, were examined with negative results as far as oil was concerned, except in one case.

These infants were then thoroughly rubbed with cod-liver oil twice daily for eleven days, care being taken to cleanse the surface of the body after each inunction, and the fæces of each examined for oil at the end of the third and of the eleventh day of inunction. At the end of the third day, traces of fat were observed in the majority of the specimens. On the eleventh day all but three specimens exhibited, on microscopical examination, a decidedly notable quantity of unabsorbed fat,—numerous oil-globules being apparent in every field.

In like manner an examination was made of the dejecta of six adults, after which each was twice daily well rubbed with cod-liver oil in the groins and axillæ for a period of three weeks. The fæces of the adults contained normally much more fat than those of the infants, but in all but one case there was a well-marked increase in the proportion of fatty globules at the end of the treatment.

The circumstances of the examination precluded the application of the ether method for the estimation of fats, and we were forced to rely upon a close microscopical examination. For the micrometric method only relative accuracy is claimed, and we hope soon to be able to go over the same ground, substituting a chemical for the optical method in the determination of fats. By the use, however, of well-mixed specimens, and by carefully averaging the contents of many fields from the same specimen, we have obtained results which we believe accurately represent the changes in the *relative* proportion of fat in the specimens examined, although the unit assumed may not correspond with that obtained by gravimetric methods.

The individuals under observation were upon a diet practically uniform in composition and quantity, both before and during the treatment. At the end of the period of inunction a marked gain in

* Randolph: Transactions of the College of Physicians of Philadelphia, 3d series, vol. vi. p. 443.

weight and general health was noted in the majority of the cases.

The results of our study are indicated in the following table:

No.	Age.	Diet.	Fat in Fæces before Inunction.	After Three Days' Inunction.	After Eleven Days' Inunction.
1	2 months	Mlk and crackers	Negative	Negative	Negative
2	3 "	" "	"	"	3 per cent.
3	4 "	" "	"	Traces	3.5 " "
4	5 "	Corn-starch and milk	"	"	5 " "
5	5 "	Milk and crackers	"	"	3 " "
6	5 "	" "	"	Negative	Negative
7	6 "	" "	Traces	Traces	Traces
8	6 "	" "	Negative	Negative	3.5 per cent.
9	8 "	" "	"	"	5 " "
10	11 "	" "	"	Traces	3.5 " "
11	12 "	" "	"	"	3 " "
12	14 "	" "	"	"	3.5 " "
13	14 "	" "	"	"	2.5 " "
14	15 "	Corn-starch and milk	"	"	3.5 " "

No.	Age.	Diet.	Fat in Fæces before Inunction.	Fat in Fæces after 21 Days' Inunction.
1	Adult.	Hospital Diet	Traces	Traces
2	"	" "	2 per cent.	5+ per cent.
3	"	" "	2 " "	10+ " "
4	"	" "	3 " "	10 " "
5	"	" "	Negative	Traces
6	"	" "	"	"

It will be seen, from the table given above, that in eighty per cent. of the cases a notable increase of the fatty matters passed per anum was observed after the persistent inunction of cod-liver oil. In the remaining twenty per cent. the quantity of fæcal fats was unaltered by the treatment, and in one case remained negative throughout.

We venture to suggest, as a provisional hypothesis, that by the continued inunction the circulating fluids became to some extent surcharged with fats, and that, in consequence, a certain amount of the fatty constituents of the food was refused by the absorbent surfaces of the intestine and passed from the body unaltered. This supposition is strengthened by the observations of Berthe,* who showed that pure cod-liver oil, given internally, could be taken for a longer time without appearing in the fæces, than could an equal amount of butter or any of the other animal and vegetable fats.

We further suggest that, in practice, the increase of fat in the stools constitutes a physiological test for the efficiency of the aliptic treatment in the great majority of cases, and that by the application of this test both the frequency of exhibition and the amount of a remedy rather repugnant to the average patient may be reduced to the minimum necessary for efficient treatment.

Biological Laboratory of the University of Pennsylvania,
November 10, 1883.

* L'Union Médicale, t. x. No. 62, 1856.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINIC OF DR. R. J. LEVIS, ONE OF THE ATTENDING SURGEONS TO THE HOSPITAL.

Reported by George F. Souwers, M.D.

REMARKS ON FRACTURES.

GENTLEMEN,—During the course of the college term I endeavor in this hospital to demonstrate as far as possible all the different forms of fracture. Nearly all the common forms of this surgical injury, and many uncommon ones, are thus brought to your notice in the lecture-room of this institution.

CASE OF FRACTURE OF THE FIBULA.

In pursuance of this plan, I bring before you this morning the individual to whose case I now call your attention. Before examining him, I shall premise that he met with his misfortune through being thrown off a street-car, striking upon the ground with his foot turned laterally, the result being, as I shall demonstrate to you, a form of fracture which is nearly always produced by falls or twists with the foot turned in this particular manner. The fracture referred to is that of the fibula, the seat of injury usually being about one and a half or two inches from the lower end of the bone, or the outer malleolus alone may be chipped

off; but we find the most common seat to be, as I have said, about an inch and a half to two inches above the lower extremity, at the point where the bone is thinnest. The fracture of this bone may be very simple in character, or it may be complicated by reason of a dislocation also of the astragalus, constituting the celebrated "Pott's fracture."

It is, when simple and uncomplicated, a fracture that is very likely to deceive one. Not unfrequently has this fracture been mistaken for a simple sprain of the ankle, for while at times there may be great deformity of the leg in the victim of this accident, yet we cannot say that there is always deformity. The most marked evidences of the fracture are the great lateral mobility of the foot, and the outward displacement of the ankle and foot. Knowing now what I have just told you, you must remember to watch cases of this kind narrowly and examine them critically. There are two methods by which you may arrive at a diagnosis. One is to grasp the foot and move it outwardly and then inwardly towards its normal position; this process will, of course, elicit crepitation, and this, together with the pain produced as you force the foot out, and its extreme range of lateral motion, will indicate with what you have to deal.

The method of procedure just spoken of answers very admirably where the patient is not fleshy, and where the fracture is decidedly marked by greater or less deformity, and possessing all or most of these features characteristic of the fracture, and which will distinguish it from simple sprain.

If now, however, you come in contact with a case of this fracture where there is but little displacement, or where the patient is very stout, fat, or muscular, you will not unfrequently find great trouble in arriving at a satisfactory conclusion as to the injury present. There is one method under such circumstances which I have tried and found to answer most admirably, and that is this: feel for the head of the fibula just near its junction with the tibia, in the neighborhood of the annular ligament; at this point make decided pressure so as to produce a tilting motion at the distal end of the bone; if fracture is present, pain will be felt, not at the spot at which pressure was made, but at the point of fracture; if you thus elicit pain you can rest assured of the diagnosis, and can direct your treatment accordingly. I may say here that this fracture is peculiarly the fracture of the leg consequent upon falls from a height, especially where the man strikes with the foot slightly everted. Fractures from a misstep, as where one falls in walking from the pavement to the gutter with the foot everted, nearly all take place here. Further, where there is lack of co-ordination in walking, as in drunken men, fracture of the leg, if it takes place, seems to select the lower end of the fibula as its favorite seat: indeed, so commonly do we admit drunken men to this hospital suffering under this lesion that I call it the "drunken man's fracture." As to treatment, do not imagine, as many seem to do, that because you apply a certain form of splint or bandage, the reduction of the fracture is thereby accomplished and the cure fairly inaugurated. Let splints for this or any form of fracture be your last thought: you can arrange splints according as circumstances and cases arise: your judgment must dictate to you what kind to employ, and not any set rule or form. Let, then, your first and primary object be the proper reduction and coaptation of the fragments. The medical mind seems to be so associated with splints for fractures that not enough care is bestowed on this item of proper reduction. A pillow for the leg and foot to rest upon, and to make equable pressure in order to retain the parts properly *in situ*, together with a fracture-box, will answer all purposes in ordinary, simple cases, and complicated cases, of course, must be, as I have said, treated on their merits.

FRACTURE OF THE STERNUM.

In this, our next case, we have an extraordinary case of fracture. While in private practice it is rare to see the form of injury we are about to examine, yet in this institution we see it with a fair degree of frequency,—that is, considering its acceded rareness. For instance, in the past two months two cases of the kind have been admitted to the wards, one of them being the case before you. This man, while at work, had a wall fall upon him, the result being a fracture of the sternum, or what generally is classed under that head. As a rule, the so-called fracture of the sternum consists of a dislocation of the manubrium, or upper segment of the bone, and this, I think, is what took place in this case. Of course we may have true frac-

ture and even comminution of the sternum, but this is generally the result of great, direct violence, as from the passage of a heavy weight across the chest, or a crushing force squeezing the chest, as in bumper and other railway injuries. The most common cause of the accident, as we here see it, is from violence that bends the body over very strongly, a force that carries the shoulders and chest into undue flexion. For instance, a not uncommon manner of this accident's occurrence is where a man working at the bottom of a well has a bucket of earth or a large stone precipitated on him from above; in stooping to protect his head the shoulders receive the impact of the blow, and this is expended ultimately on the sternum. The chest at the point of fracture or dislocation, which is generally situated at or about the second intercostal cartilage or space, is driven in so as to leave a large depression, similar to the one in this man's case, which admits of the burial of his fist in the deformed chest-wall. Indirect violence, as by a fall on the shoulder, will also produce this accident, which, as I have said, is more of an epiphyseal separation than a true fracture. The contiguous ribs stand out prominently and boldly at the seat of injury. The best method of reduction is to pile pillows upon each other under the patient's back till a high fulcrum is formed, over which he is bent backwards by the shoulders; extreme retroflexion is made, until the peculiar snap of the fragments returning into place is heard. In those cases where the accident follows violent direct injury, death generally occurs, in consequence of rupture or injury of the heart, lungs, or great vessels, and nothing can be done for the relief of the victim, such cases not being amenable to treatment. Pressure at the seat of accident will generally elicit pain, as in all other forms of fracture. After reduction the patient should be kept in the recumbent posture and carefully watched for chest-symptoms.

FRACTURE OF THE FEMUR, WITH DELAYED UNION.

At the last clinic I showed you a case of delayed union in a case of fracture of the femur, the patient being a man who was somewhat advanced in life, and who had at various times in his career suffered other forms of fracture, in which delayed union was present. The case I now bring to your notice shows the same condition, in the femur of a boy about 12 years of age. This boy has had also previous to this a fracture of the bones of the opposite leg below the knee; this, however, healed nicely and without complications. Now, ten weeks after receiving this fracture of the femur, we find a condition of pseudo-arthrosis, or false joint, though there seems to be a good deal of callus thrown out around the point of fracture. In some this condition of delayed union seems to be traceable to some vice or debility of the system, as a syphilitic or cancerous cachexia. In others we may have various causes; a piece of tendon, muscle, or bone may by its position prevent proper coaptation and union of the fragments; or we may have a condition that obtains in some cases,—namely, instead of the inflammation following such an injury being an inflammation of repair, it seems to be an inflammation of rarefaction; callus is not deposited, but the ends of the bone become rounded off, attenuated, and flail-like in character. In private practice I have found that too tight bandaging, by interfering with the nutrition of the parts, is a most prolific cause of this disastrous termination of fractures. The best remedy in any case is to build up the system, get the patient out of bed and into the open air, allow him to walk about on the injured leg, having first enclosed it in a permanent dressing, and, by means of the attrition thus produced of the ends of the bone, strive to set up a reparative inflammation. The leg naturally hangs down, and in its normal position with this increased stimulus it may be that sufficient extra circulation may take place in the part to accomplish the desired end.

TRANSLATIONS.

TREATMENT OF WENS BY ETHER-INJECTIONS.—A communication to the *Bulletin Générale de Thérapeutique*, by Dr. Lemoyez, Interne at the Hôpital St.-Louis, Paris, discusses the different methods of treatment of sebaceous cysts of the face and scalp, and recommends parenchymatous injections of pure sulphuric ether. A case is reported of a man debilitated and affected with chronic alcohol-poisoning, therefore a bad subject for a surgical operation, who was relieved of a wen of five years' growth

by ten hypodermic injections of ether practised at intervals of a day or two. The result was the conversion of the tumor into a cyst with fluid contents, the evacuation of the same, and speedy destruction of the cyst-wall by inflammatory action. In the case quoted, the treatment resulted in a perfect cure in a month, without keeping the patient in bed or restricting his movements as would have been required by the ordinary operation.

The advantages claimed for this method are its simplicity, painlessness, and efficiency, without exposing the patient to the risk of a surgical operation or in any way interfering with his business. The injections are made into the interior of the cyst, five or ten drops at each sitting, the needle of the hypodermic syringe being moved about so as to break up the contents as much as possible. They are discontinued when inflammation or suppuration begins.

Treatment of Chronic Urethritis and Cystitis.—Dr. Guyon lays much stress upon the constitutional treatment with cod-liver oil, arsenic, iodide of iron, the sulphides externally and internally, balsams, douches, etc., according to the diathesis. The local treatment by injections, instillations, and catherization is also of great value. Injections are only useful when judiciously employed; although most frequently used, they often fail on this account. They are either too strong or not strong enough; they either do injury or they are not efficient. Instillations made with an olive-pointed catheter in which an opening exists at the side of the olive are more valuable. A syringe is adjusted to the other extremity of the catheter, and the instrument is gradually introduced into the urethra until it meets a slight sense of resistance, when five or six drops of the solution are thrown in; after waiting a few minutes, the instrument is introduced farther, and, when it reaches the posterior extremity of the urethra, twenty to twenty-five drops are injected. The medicament usually employed by M. Guyon is the nitrate of silver ($\frac{1}{20}$ to $\frac{1}{50}$); he also uses the sulphate of copper ($\frac{1}{10}$ to $\frac{1}{30}$). Catheterism is not to be practised early, for fear of complications, orchitis, cystitis, etc., but in obstinate cases it may be cautiously used every second day; the metallic bougies are the best for the purpose. Medicated bougies seem to be without utility. Should blennorrhagic cystitis with hemorrhages occur, it is best treated by instillations of nitrate of silver, which rapidly stop the bleeding. This treatment is also effective in chronic cystitis, which is particularly liable to be persistent and have relapses.—*Bulletin Général de Thérapeutique*, November, 1883.

Spontaneous Pyæmia.—A young man, 32 years of age, was suddenly taken, without appreciable cause, with muscular pains, and swelling of the sheaths of the tendons of the wrist and of the foot, which appeared rheumatic. Upon examination there was found very marked tenderness and swelling along the course of the tendons in the leg, in the forearm, and in the calf of the leg, present in all of the four extremities, but more marked, however, upon the arm and leg of one side. M. Guyot, who had the case under observation, pronounced it one of pyæmia, but was unable to detect any cause for it. There had not been any traumatism, no trace of any cachexia, no evidence of over-fatigue, no diabetes, no albuminuria, no marked alcoholism. The diagnosis of idiopathic pyæmia was then made. The patient died twenty-four hours later. [The record does not state that the possibility of the case being one of trichinosis had been considered, although some of the symptoms might suggest this explation.—Tr.]—*Revue de Thérapeutique Méd.-Chir.*, No. 23.

Charcoal-and-Camphor Dressing for Wounds.—Barbocci (in *Raccoglitore Medico*) recommends a mixture of equal parts of camphor and animal charcoal as a substitute for Lister dressings. The camphor acts physiologically in destroying microbes, the charcoal physically by absorbing and disinfecting the discharges. This is especially useful in old, excavated ulcers; the application removes fetidity and also relieves pain.—*Revue de Thérapeutique Méd.-Chir.*, December 1.

For the Treatment of Phagedænic Chancres.—

℞ Acid. pyrogallic., 20 gm.;
Petrolati, 80 gm. M.

or

℞ Acid. pyrogallic., 40 gm.;
Petrolati, 120 gm.;
Amyli, 40 gm. M.

Vidal.

In use at the Hôpital St. Louis.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 29, 1883.

EDITORIAL.

THE COMPLIMENTS OF THE SEASON.

AS this is the season of the year for compliments, greetings, and mutual wishes for success, we but follow a graceful custom in cordially tendering those of the *Philadelphia Medical Times* to its readers. In doing so we may be pardoned a few remarks upon the standard to be adopted in estimating the measure of professional success, and, perhaps, a suggestion as to its essential elements and conditions. In what follows we will express sentiments which are those of the better portion of the profession, and which we feel certain will meet the approval of our readers.

Action, said to be the secret of oratory, is certainly one of the necessities for success; what is called genius is often merely a talent for steady, persistent labor. But when men are actively striving for progress in the same direction, there is danger that some, in their eagerness for personal advancement, may disregard the rights of others. In a profession, which is distinguished from a business by an elevation of the claims of the mass above those of the individual in certain directions, this danger of encroachment can be avoided only by mutual agreement as to the principles which shall regulate conduct, and the recognition of this truth has led to the establishment of what have been called codes of ethics. Since the introduction of the Code of Ethics of the American Medical Association, it has been observed that the tone of professional intercourse in this country has manifestly improved,* and for this reason it is warmly defended, and rightly so, by the great mass of the profession. The Code is now taken as the measure of a physician's duty to his colleagues, and his failure to obey it, in letter or in spirit, in his daily life, is regarded as failure in his highest obligations to his profession. For failure in this duty we feel that no other kind of success can atone, be it political, social, or financial. Too often a superficial estimate of success is made, based upon the apparent material prosperity of an individual; but a little reflection shows that the real standard of success is character, whether in private or in professional life. How often it is that a man's true nature is better known to his associates than he is himself aware! When a man actuated solely by selfish motives enters upon the practice of medicine, and, in pursuit of personal aggrandizement, profanes its solemn and responsible duties, he cannot long conceal this fact from those around him. The success of the charlatan certainly may be his, but never the love and esteem of his professional brethren; and the more self-asserting and the more conspicuous he is, the more obvious and melancholy is his failure. A true estimate of professional success is based upon services to humanity and to the profession. In the real physician, if his life-work be crowned by wealth and honors, they but lend a setting to the jewel; if these linger, success has not been missed. Of the late Dr. J. D. Trask, of Astoria, New York, who died a short time since, and whose death was called a public affliction, an entire community attending his funeral, it was said that "as an author, practitioner, citizen, and Christian he did his work effectively, quietly, conscientiously, and for the work's sake." The *Medical Record*, in whose columns this touching tribute appeared, adds, "It would be well if such could be said of all of us." This is the life and this the success that we cordially wish for all our readers. Its rewards may not be so alluring, but they

* See the address of Dr. John L. Atlee before the American Medical Association this year.

are more permanent and satisfying than those of the less honorable course indicated above, which is sometimes considered a successful life, though judged according to a mercenary and not a high professional standard. We owe it to the profession and ourselves to use our best efforts to elevate it, and, in order to do so, we should urge men of lower ambition to—

"Shun braggart glory, crave no sounding name;
Good deeds in heaven's scales weigh more than fame.
All pomp and vain display avoid, although
The foolish world is led by empty show.
Be always what you seem, seem what you be;
With learning couple large integrity.
Through merit seek to rise, and not by dint
Of blazoning your names in public print,
Or pseudo-scientific pamphlets, which
Not science, but their writers seek to enrich
Through wondrous tales of cures adroitly told,
To snare the credulous and filch their gold.
Praise not yourselves, nor others' praises buy;
As men, not showmen, with each other vie.
Upon the public never seek to palm,
With face unblushing and without a qualm,
The coin of base, presumptuous pretence
For sterling gold of honest excellence."*

PULSATING EMPYEMA.

DR. COMBY, of Paris, has made pulsating pyothorax the subject of two interesting communications to the *Archives Générales de Médecine* for November and December, 1883, from which we glean the following points in regard to the symptomatology, causation, and treatment of this rare affection, which was first observed by Baillou in 1570.

In all of the twenty-seven cases analyzed by Dr. Comby, the effusion was seated in the left chest, and the symptoms were almost identical. After a certain period, a soft, pulsating, fluctuating, reducible, hemispherical swelling is observed, ordinarily on the lateral lower half of the thorax, although it may be seated in front, or on a level with the præcordial region, or behind and below, near the vertebral column. It may, moreover, occupy the loin, in which event it may be regarded as a perinephritic abscess with transmitted aortic pulsation, as happened in a case recently in the wards of the Jefferson Medical College Hospital of this city. The pulsations are not expansile, nor are they, as a rule, forcible, nor are a thrill and bruit present, as happens in aneurism. The heart is invariably displaced to the right. The beats are not augmented in force, the rhythm is regular, there is no souffle, nor any other sign indicative of cardiac lesion. During all this time (and the affection pursues a very chronic course) the general health may remain good, or the patient may die before the pus is evacuated. Generally, however, the pus discharges itself spontaneously, the pulsations cease, and signs of pneumothorax set in, the heart rarely resuming its normal position.

In post-mortem examinations, the left lung is found with difficulty, being compressed against and adherent to the pericardium. Its tissues are hard, fibrous, elastic, impermeable to the air,—in a word, sclerosed. Hence the pulsation is due to the beats of the heart being forcibly transmitted by the sclerosed lung to the purulent collection.

The treatment of pulsating empyema is rarely successful, on account of the structural alteration of the left lung, the displaced heart, and the debilitated or tuberculous condition of the subjects. Thoracentesis is, of course, indicated; but the remedy is, as the rule, merely palliative.

In concluding his memoir, the author insists upon the facts that a left pulsating pleurisy is a purulent pleurisy, and that the function of the corresponding lung is entirely abolished, which is a sign of the incurability of the affection.

THE ADDRESS OF PROFESSOR PARVIN, which appeared in our Educational Number, was printed from copy which we received directly from the hands of the author, and we believe it to be the only correct version of his lecture which was published up to that time.

*Valedictory poem, by the late Prof. J. Aitkin Meigs, M.D.

SOMETHING FOR OUR MEDICAL SOCIETIES TO TAKE NOTE OF.

THE Board of Trade of Philadelphia Druggists has passed a resolution, to which the support of a number of our principal druggists is pledged, that after January 1, 1884, the said druggists will positively refuse to keep or deal in those proprietary medicines which are sold indiscriminately to individuals engaged in other kinds of business than dealing in drugs. Certainly, any step of this kind should be formally noticed by our medical societies, which should use every means in their power to discourage the sale of nostrums. The present time may be favorable for the establishment of pharmacies where physicians' prescriptions are compounded and no patent medicines sold.

SHALL THE INDEX MEDICUS BE DISCONTINUED?

IN a circular issued by the publisher, Mr. F. Leypoldt, it is stated that "Five years' publication of the *Index Medicus* has proved conclusively—

"1. That the mere cost of production (per annum) is not less than $5000.

"2. That the maximum return from subscriptions, at six dollars per annum, has not exceeded $3600.

"3. That the increase of subscriptions during the past two years has been merely nominal.

"4. That the limited circulation permits no material return from advertisements."

The publisher also states that he agrees with the editors that, in justice to themselves, as well as to those whose generosity has already been severely taxed, the *Index Medicus* must no longer be dependent on voluntary communications. The undertaking must either be abandoned or at once placed on the business-footing of an equally-shared support. There are about six hundred subscribers, to whom the question is pointedly addressed whether they will increase the amount of their annual subscription to ten or twelve dollars per annum, if necessary. A prompt answer to this query is needed in order to make the necessary arrangements for the ensuing year, if the work is to be continued. This work has reflected honor upon American medical journalism. It is more than a credit to our medical literature: it has become almost a necessity to all who have occasion to consult it. We feel certain that the profession will not willingly allow it to be abandoned, without some effort to establish it upon a more secure and satisfactory foundation.

LEADING ARTICLES.

PTOMAÏNES.

IN 1872 the late Professor Selmi presented to the Academy of Bologna a paper embodying some curious and interesting results which he had obtained by treating both fresh and partially-decomposed viscera according to the Otto-Stas method for the separation of alkaloids. Although the tissues under experiment could have contained no vegetable alkaloids, he at times obtained extracts which responded to the general tests for these substances, and which corresponded to no compounds which had hitherto been separated from animal tissues. Attributing these reactions to basic compounds of animal origin, he gave to such alkaloid-like bodies the general name *ptomaïnes*.

Several attempts had already been made to isolate the toxic principle of decomposed tissues, but the results were of a character to attract little attention.

Selmi continued his experiments during six years, and in 1878 published a remarkable paper, "*Sulle ptomaïne od alcaloidi cadaverici e lore importanza in tossicologia*," in which he described ptomaïne reactions simulating those of conine, morphine, atropine, and delphinine. Two medico-legal cases had occurred in Italy, in which the first examination had indicated the presence of morphine and delphinine in the cadaver, but in which a second analysis, under the direction of Selmi, had

shown no trace of either of those substances, but the existence of abundant ptomaïnes.

The importance of arriving at more precise knowledge concerning compounds, the suspected presence of which might invalidate chemical testimony in capital cases, led to the appointment by the Italian government, in 1880, of a commission, composed of the late Professor Selmi and Professors Cannizzaro, Guareschi, Moriggia, Mosso, Paterno, Spica, and Toscani. The expenses of the investigation are, at least in part, defrayed by the government, but the work has been conducted individually. A few papers have already appeared.

In the mean time, several other chemists have engaged in the same line of research, and practically the results have been sufficiently concordant to indicate the existence of a series of ptomaïnes, of which a limited number have finally been isolated in sufficient quantity to permit of analysis.

Selmi described the first separated of these bodies and the physical characters of its hydrochloride to the Academy Lincei in 1880. The alkaloid resembled conine, and its effects on animals to which it was administered were similar to those of curare. Th. Husemann's experiments afterwards fully confirmed these results.

In 1881 Armand Gautier demonstrated the basic nature of the bodies in question by their power to neutralize strong acids, and by the crystallization of their chloroplatinates, etc. In 1882 the same chemist called attention to the early history of the subject. The first step seems to have been made in 1856, by Panum, a Dane, who obtained from putrefied dog's flesh a poisonous extract, which he called *sepsine*. Eighteen years later Panum maintained the non-alkaloidal character of this poison. Bergmann and Schmiedeberg investigated sepsine in 1868; and in 1869 Zuelzer and Sonnenschein extracted from cadavers alkaloidal substances which they believed to be different from those which had before been obtained. These bodies produced dilatation of the pupil.

Gautier's first experiments seem to have preceded those of Selmi: they are mentioned in his "Chimie appliquée à la Physiologie." Indeed, Selmi states that Gautier seemed to have underestimated the importance of his first results, from which he concluded that "these same alkaloids are often produced abundantly in living animals, and are constant and necessary products of normal tissue-life."

In collaboration with A. Etard, Gautier undertook extensive experiments in 1881. The first researches concerned the different phases of putrefaction. The results indicated that the true putrefactive fermentation begins with the disengagement of nitrogen; the large bacilli and bacteria are then replaced by exceedingly small, tremulous bacilli, having highly refracting heads, some straight, some serpentine. These attack the albuminoid molecules, and there is an evolution of hydrogen sulphide and hydrogen phosphide, while leucines, leuceines, skatol, indol, carbylamines, and ptomaïnes are formed.

By the following process Gautier and Etard succeeded in isolating two bases from putrefied fish (mackerel). The liquid products of the fermentation were separated from oily matter, etc., acidulated with sulphuric acid, and evaporated in a vacuum; the phenol, indol, etc., were thus driven out. The residue was neutralized with baryta-water, filtered, and the filtrate agitated with chloroform. After the evaporation of the chloroform, the residue was extracted with solution of tartaric acid, and the addition of potassium hydrate liberated the bases, which were fractionally extracted with ether, and dried in a vacuum. From the first ethereal extracts a base was obtained having the composition $C_9H_{13}N$. The last extracts yielded another alkaloid, to which analysis seemed to assign the formula $C_8H_{13}N$.

M. Nencki claims to have separated these bases from the products of the decomposition of gelatin in presence of pancreas. From a single analysis of the chloroplatinate, in which he estimated the carbon, hydrogen, and platinum, he gave the composition $C_8H_{11}N$.

L. Brieger, of Berlin, has recently obtained ptomaïne reactions from peptones prepared by the action of gastric juice on egg-albumen, and in one case from a commercial peptone. The base could not be isolated, but the extracts manifested decidedly poisonous properties. The following process enabled him to obtain a pure ptomaïne. Finely-chopped horse-flesh was mixed with water and kept at a fermentation temperature for five or six days, after which the broth was filtered and the liquid precipitated with lead acetate. The filtrate from the lead precipitate was freed

from lead by means of hydrogen sulphide, and the filtered liquid evaporated to a syrupy consistence and extracted with amyl alcohol. The extract was repeatedly exhausted with water, and the solution evaporated. The watery residue, strongly acidulated with sulphuric acid, was shaken with ether to remove the oxygen acids, and then evaporated to a fourth of its volume to drive out the volatile acids. After precipitation of the sulphuric acid with baryta-water, the solution was treated with mercuric chloride, and the washed precipitate suspended in water and decomposed by hydrogen sulphide. The inorganic salts which first separated on the evaporation of the clear filtrate were filtered out and washed with absolute alcohol. Then from the united liquids an organic substance crystallized in long needles, which were readily soluble in water and alcohol, but insoluble in absolute alcohol, ether, and chloroform. These crystals are the hydrochloride of a base, $C_5H_{14}N_2$, which decomposes when attempts are made to isolate it from the salt. Half-gramme doses of the pure salt administered to rabbits produced only feeble symptoms of poisoning, but the unpurified extract manifested toxic properties similar to those of the peptone extracts already mentioned. Indeed, the liquid from which this salt crystallized contained another and much more poisonous base, which appears to have the composition $C_5H_{11}N$, being isomeric with piperidine. Administered to rabbits, guinea-pigs, and cats, this compound produced characteristic symptoms, one of the more notable being an abundant secretion of thick, alkaline saliva and nasal mucus. In one case the paws of a cat, dry before the administration of the poison, became bathed in an abundant alkaline perspiration. Internal administration produced the same symptoms as hypodermic injection, but required a much larger dose. In either manner large doses were followed by death after short tonic and clonic spasms.

E. and H. Salkowsky have extracted from putrid flesh and fibrin a basic compound to which their analyses assign the composition $C_5H_{11}NO_2$. This body possesses no poisonous properties, and does not appear to be a ptomaïne according to the sense in which that name is received. Its reactions are not described. Its composition is that of an amide of valeric acid.

The most valuable work which has been conducted is described in a recent memoir by Guareschi and Mosso. The researches appear to have been conducted in a most thorough manner, and the results are of especial importance in that they have led the authors to condemn Dragendorff's method for the separation of alkaloids in medico-legal cases.

They first examined the solvents ordinarily employed,—ether, alcohol, amyl alcohol, chloroform, and benzol.

When commercial alcohol is evaporated to dryness with a small quantity of hydrochloric or tartaric acid, there is always a residue, which, when exhausted with ether according to the usual method for the extraction of alkaloids, yields an extract that responds to the alkaloid reactions. For use in medico-legal cases, or researches for ptomaïnes, alcohol must be purified by one or sometimes two distillations over tartaric acid.

Ether is sufficiently pure when twice washed with acidulated water and then distilled over lime.

Amyl alcohol (the purest of commerce) contains five-tenths per cent. of pyridine, and its use must be avoided (Uslar and Erdmann's process).

Chloroform may be purified by washing with water, then with solution of potassium carbonate, and final distillation over calcium chloride.

The purest crystallizable benzol of commerce yields, by distillation with potassium hydrate, an aqueous residue containing pyridine.

From these preliminary experiments the authors conclude that all the results heretofore obtained by different observers who used alkaline extracts prepared by means of amyl alcohol and benzol, are absolutely without value, whether the experiments have been made on putrid or on fresh materials.

Thirty-six kilogrammes of human brains were then allowed to putrefy during two months, and the homogeneous broth was treated according to the Otto-Stas method. Only an insignificant quantity of ptomaïnes was obtained, so small that no analysis could be made. The extract, in doses of 0.0125 to 0.3 gramme, was administered hypodermically to frogs. The effects were analogous to those of curare, but the action was much less energetic, more of the poison being required to produce an effect comparable to that of a given dose of curare:

even when the intoxication was very great it passed off much more rapidly than that due to curare. The larger doses were, however, fatal. Experiments made on a guinea-pig showed that, so far as its physiological action is concerned, "the extract of putrefied human brains cannot be confounded with any of the poisons usually employed in criminal poisonings, for incomparably smaller doses of curare, conine, nicotine, etc., would have produced much more serious symptoms, or would even have killed the animal."

Experiments were made with fibrin, in hopes that the definite and unique character of that body might yield less complex compounds than mixtures of blood, flesh, etc.

The product of the decomposition of eighty kilogrammes of ox-blood fibrin, left to itself during five months, was treated according to the process adopted by Gautier and Etard in the experiments already mentioned. The strongly alkaline extract obtained on the evaporation of the ethereal solutions was neutralized with hydrochloric acid, and the dry residue of a new evaporation formed crystalline double salts with platinic and auric chlorides, and responded to the general tests for alkaloids. An analysis of the platinum compound indicated the composition $C_{10}H_{15}N$ or $C_{10}H_{13}N$. Eleven chloroform extractions were made in these experiments, and each extract was treated separately and the base analyzed. The results were sufficiently concordant with those required by the preceding formulas. If the latter of the two formulas given be correct, this base may be homologous with those obtained by Gautier and Etard. Experiments on frogs and birds showed that the action of these bases corresponded to that of the extract from putrefied brains. The effects of the hydrochloride are more marked than those of the free base.

From fresh brains, treated by the Otto-Stas process within twenty-four hours after death, Guareschi and Mosso obtained small quantities of residues which responded to the general tests for alkaloids.

Perfectly fresh beef was extracted by Dragendorff's method, using sulphuric acid and water, evaporating the liquid to syrupy consistence, and exhausting this syrup with alcohol. Towards the end of the distillation of the alcohol a volatile substance which appeared was condensed in hydrochloric acid. The residue gave full indications of the presence of alkaloids; and the hydrochloric acid solution, neutralized with ammonia and exhausted with ether, yielded a small quantity of extract having an odor like conine, and responding to alkaloid tests.

In order to determine whether the sulphuric acid used in this operation had caused the formation of these bodies, the experiment was repeated on the same quantity of meat (fifty kilogrammes), tartaric acid being substituted for the sulphuric. The quantity of products obtained was much smaller,—only about one-tenth that yielded by the first experiment,—but a microscopic examination of the platinum precipitate gave evidence of a body very similar to the chloroplatinate of the base extracted from putrid fibrin. "The results obtained by the aid of Dragendorff's process are then very different accordingly as sulphuric or tartaric acid is employed. In the first case an abundant acid-ether extract contained lactic and succinic acids, and there was a relatively large alkaline ethereal extract. Both extracts were much smaller in the second case, and succinic acid could not be detected. These comparative experiments show that in the extraction of fresh animal tissues by Dragendorff's method the products obtained are due, at least in part, to the decomposing action of the sulphuric acid." These experiments show that this method is to be avoided. The Otto-Stas method, on the contrary, yields good results, especially if only that quantity of tartaric acid be employed which will give an acid reaction to the mixture, and the evaporation be conducted at a low temperature, or, better, in a vacuum. Fresh materials treated in this manner yield almost no ptomaïnes, and successive purifications eliminate them entirely.

Experiments made on fresh meat, without the addition of acid,—and the natural acidity of the flesh justifies this mode of extraction,—showed that the exceedingly small quantities of alkaloidal bases obtained were probably formed during the evaporation of the liquid, owing to alterations in the albuminoid matters. The matter which crystallizes from the ether in this case gives no alkaloid reactions. It was found to be methyl-hydantoine.

These results of Guareschi and Mosso are confirmed by some experiments by F.

Coppola, who extracted from the fresh blood of a healthy dog relatively large quantities of poisonous ptomaïnes by Dragendorff's method, but, in operations in which no reagents were employed other than the chloroform used for extraction, obtained no evidence of the presence of ptomaïnes.

The investigations of which we have summarily considered the results have been faithfully conducted by chemists and physiologists concerning whose work there can be no question as to accuracy. The experiments are in one respect unsatisfactory, in that they have not solved the problem of the exact conditions under which ptomaïnes may be formed. In this they resemble the greater number of chemico-physiological researches. However, the later results are of unquestionable importance in their bearing on the methods employed in medico-legal investigations, and indicate that, when proper precautions are adopted, cadaveric alkaloids need not be confounded with the vegetable alkaloids used as poisons.

The exceedingly small quantities of the bases which have been separated have in so few cases permitted a study of the physical and chemical properties of these compounds, that they are practically recognizable only by the general alkaloidal tests and their physiological effects. For equal doses these effects are so much less energetic than those of other and similar poisons, that careful comparative experiments may remove all fallacy which the existence of ptomaïnes might appear to indicate as objections to physiological tests in the search for an unknown poison. A neglect of such comparison would at present probably throw doubt even on such results as those obtained by Tardieu and Roussin in the La Pommerais case.

Nothing that has been developed in the study of ptomaïnes indicates that these bodies are the cause of septic poisoning as we ordinarily understand that term. The alarming blood-poisoning which may follow an insignificant scratch on the finger could be accounted for by the introduction of an infinitesimal quantity of a purely chemical compound into the system, only should that compound possess the energy of the rattlesnake's venom, or should it act as a non-organized ferment capable of profoundly modifying an indefinite quantity of matter. No such ptomaïne has been isolated. However, few of the experiments thus far made have thrown light on the effect of time on the stages of putrefaction, and it is possible that the bases present at a given epoch may have existed only during a short period, and may be entirely transformed at a later stage of the almost hopelessly complex reaction. The time, patience, and expense necessary for such researches have limited their number, and the valuable results contributed by Italian experimenters would probably be yet unattained without government co-operation and liberality.

It seems certain that ptomaïnes do not pre-exist in normal tissues, and it is highly probable that the ptomaïnic reactions obtained by Gautier from urine, and by Paterno and Spica from fresh egg-albumen and blood, were due to bodies produced during the processes of extraction. The statement of Mourson and Schlagdenhauffen, that ptomaïnes exist in the amniotic fluid, is open to the same criticism, especially as mere traces of their presence could be detected.

It would not, however, appear strange that under certain conditions the urine, and even the blood, should contain toxic bases. Brieger opens a weighty question in stating that "in a large number of infectious and intestinal diseases death takes place rapidly, and under such circumstances that there can be no other explanation than that of the sudden formation of toxic substances by fermentation in the body." All the recent publications on the genesis of ptomaïnes are in accord that such genesis does not take place during health. Experiments on conditions of the urine and blood in certain diseases may throw a new light on the immediate cause of death, which may not be due to bacilli, but to the fermentation-products produced by the bacilli. If by changes in the albuminoid matters the blood become charged with poisonous bases, why should not the antidote for such poisons be sought in the laboratory and then applied in practice? This field of physiological research is certainly an open one, and may possibly be as fertile as has been that of pathological microscopy.

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WILLIAM H. GREENE.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO LETTER.

NOTWITHSTANDING the excellent laws we now have for governing the practice of medicine, for some reason or other, a score or so of advertising "specialists" have been for a long time more brazen than ever before, and the Sunday editions of the daily papers have contained columns of nastiness in the form of their advertisements.

A few days ago, somebody set the machinery of the law in motion, and quite a number of the "specialists" have been arrested and brought before the court to give bail for reappearance. Spasmodic attempts to enforce the law had been made at different times, but all had ended without accomplishing much.

Let us hope that the present effort may be more successful in permanent good.

Like New York, we have a liberal allowance of stench-factories, and the Health Commissioner has from time to time tried to suppress their offensiveness, never with complete success, however. The stench-factories now resort to the method of holding in their store of offensive and nauseating gases during the day, and pouring them out during the night or early hours of the morning, when the population is asleep; but those who have open windows, or ventilators connecting with the open air, are painfully reminded how difficult it is to secure a refuge from this great public nuisance.

The building at present occupied as a Hospital for Women and Children proves inadequate for the purpose, and it is proposed to erect a new building calculated to accommodate from eighty to one hundred and fifty patients.

Plans are now being prepared, and the work of construction will at once be pushed forward.

The new Rush College Hospital is making rapid progress, and will be ready for occupation early next spring. The Cook County Hospital has two new pavilions ready for service, giving an increased capacity of about one hundred and fifty patients. The health of the city, in spite of the quacks and the bad odors, remains exceptionally good.

CHICAGO, December 5, 1883.

CORRESPONDENCE.

LONDON LETTER.

WE have recently had a very unpleasant episode in the medical profession,—the more unpleasant in that it shows that the medical profession is not as true to itself as it might be and ought to be. The utility of the nitrites in medicine is now fully established, and a very important armamentarium they have proved. Dr. B. W. Richardson established the effect of amyl nitrite upon the vasomotor system of nerves,—relaxing the walls of the smaller arterioles, and, therewith, lowering the blood-pressure within the arteries. Then Dr. Lauder Brunton, finding the blood-pressure raised in angina pectoris, used the amyl nitrite with marked good effect in a severe case of angina. Since then the use of nitrites has spread rapidly. Then nitroglycerin came up, and in its use Dr. Murrell holds an honored and conspicuous as well as well-won reputation. More recently still, Dr. Law, of St. Leonard's-on-Sea, has used the nitrite of sodium in the treatment of epilepsy, where there is often a rise in the blood-pressure as the fit comes on. Whatever the hypothesis upon which the drug is given is scarcely to the present purpose: the clinical aspect is the one here interesting us. Dr. Law reported a case of epilepsy in which he had given twenty grains of sodium nitrite without any ill ef-

fects. From observations afterwards made by Dr. Ralfe, it seemed that the preparation used by Dr. Law was very impure, being largely adulterated with the *nitrate:* hence the harmlessness of the twenty-grain dose. Unfortunately, the dose of sodium nitrite given in the last edition of Prof. Ringer's famous work on "Therapeutics" is a scruple; and, in consequence thereof, the widest publicity on this matter is desirable, as this is a very dangerous, if not actually lethal, dose of the pure drug. The subject of the impurity of the ordinary sodium nitrite was brought before the profession in October last year, and Dr. Murrell thought it good and desirable to test the action of the nitrite, in order to clear up the subject. According to his explanation, he thought it well to see if sodium nitrite was superior to nitro-glycerin in some maladies, in the interests of his patients,—a perfectly valid and sufficient reason to unprejudiced minds. To one patient ten grains were given without obvious effects, and the dose was raised to fifteen grains. To a second patient ten grains were given with very decided toxic symptoms, of which giddiness, sickness, and a feeling of fulness in the head were prominent. He had also other symptoms. With the experience of the first case before him, Dr. Murrell urged the patient to try it again; but he declined, on the plea that he "had a wife and family." This was put forward rather in joke than in serious earnest, as the man disliked the sensations. Other patients came back complaining of allied disagreeable sensations, and then Dr. Murrell recognized the fact that sodium nitrite possessed toxic properties. He then reduced the dose to five grains, and subsequently again to three grains. He then communicated his observations to Prof. Ringer, with whom he has prosecuted much therapeutic research. Ringer experimented on some cats to test the action of the drug, with such results that a conjoint paper on "Nitrite of Sodium as a Toxic Agent" appeared recently in *The Lancet*. Dr. Murrell has explained, since the thunder-storm arose, "There has been nothing in the shape of experimentation, and I have prescribed nitrite of sodium only in those cases in which, from my previous experience with nitro-glycerin, I was convinced that it would prove useful." The value of a statement depends upon a man's character; and Dr. Murrell bears the reputation of a truthful man. Consequently, this statement may be accepted without reserve. In giving an account of the observations, Dr. Murrell did not foresee that the matter would come prominently before the public, and so laid himself open to attack, which attack was soon made by a suburban clergyman who had seen *The Lancet*. The object of the paper was to point out that two—and not twenty—grains constituted a sufficient dose of Morson's sodium nitrite. To the medical mind the value of such a paper, under the circumstances, is apparent enough.

The world-wide sale of Prof. Ringer's book called for a prompt and convincing statement of the actual facts. "A plain and straightforward statement of facts" was made. The committee of investigation of the matter stated their opinion on the subject thus: "The sub-committee, after careful consideration of these facts, see no reason why the House Committee should withdraw from Dr. Murrell their confidence in his ability and humanity, and they trust that the unfortunate manner in which the paper was put together will be forgotten, while the value of his experiments will remain. In this connection, the sub-committee would call attention to the fact that, in consequence of this experience, the 'official' dose of nitrite of sodium, hitherto appearing in the standard text-books of therapeutics as twenty grains, has since been reduced to two grains, and a permanent source of danger has thus been averted." A very sensible conclusion, it seems. The clergyman, however, saw only the sensational side of the subject, and wrote a long and forcible letter to *The Standard*, which must have carried joy and delight to the hearts of the anti-vivisectionists, always a lively and obstreperous set. It was said, if experimentation upon animals was stopped, then experimentation upon human beings would follow; and, lo! here was the full and complete verification of the prophecy. Poor hospital patients!—expermented upon when they sought relief from their maladies! Could any more convincing proof of the immoral tendencies of the scientific physician be required or furnished? Howls of execration, attended with delight, went up from the anti-vivisectionists; wails arose from the better-disposed section of society at such lapses in the medical character. Of course, a storm in a teapot blew with an unusual energy. The authorities of University College protested that these experiments had not been conducted at their institution, to which Prof. Ringer is physician. The authorities of Westminster Hospital put in their certificate that it was not in their institution Dr. Murrell had performed his experiments. Where they were carried on I do not know. Then stepped forward one of Dr. Murrell's colleagues (I will refrain from mentioning his name, for which I am sure the day will not be far distant when he will thank me), though it is impossible to avoid commenting on what he has said and done. He wrote a letter to *The Standard*, signed "A Hospital Physician," but subsequently in a signed letter to the *British Medical Journal* he repeats what he said in his previous letter. As a colleague, it was scarcely his duty to step forward to lash Dr. Murrell; as a physician who is not specially known in connection with experimental research, he was not particularly involved. However, he did come

forward to assail his professional brother; and, after assaulting him under a *nom de plume*, he throws off all disguise and goes for him again in his own name. He thinks it necessary to the good name of the profession to set his face against such proceedings; and, while his courage may excite the admiration of some, his temerity has roused the indignation of others. The editor has come down upon him hotly, as the following extract will show: "With the chivalry which rushes into print in a lay journal, under a pseudonyme, to hand over a brother practitioner to the tender mercies of 'a hostile party' in the public press, and helps, 'in the name of science and humanity,' to brand his reputation with levity and flippancy in the discharge of his difficult and sacred duties, we have no sympathy."

The Medical Press and Circular eases its mind in emphatic language upon the subject "of open-handed attacks made by one physician against another. We have, unfortunately, had occasional, but still rare, examples; but never, even in the worst cases of professional bickering, do we remember an instance in which cowardly resort to anonymous publication has been adopted by any one of position in the world of medicine. Bad as the original offence was in the sight of every honorable person, it is greatly intensified by the ill-judged letter which he has set forth apparently in justification. He should clearly understand that the conduct of a man who slanders his colleague from behind the shield of anonymity is without the pale of forgiveness by every one of his professional brethren who place honor before material gain; and anything that he may say in extenuation of his gross breach, not only of etiquette, but of morals, will only intensify the feeling with which his act is generally regarded." These are no doubtful utterances; and the gentleman has clearly been guilty of conduct which the medical profession unsparingly condemns. But both are Fellows of the Royal College of Physicians; and the College guarantees the behavior of its Fellows and members towards each other. To be sure, it cannot—being fallible, like all other human institutions—always secure good conduct from its Fellows, sad to say. But a great parade is made of withholding the Fellowship from sundry men for unprofessional conduct (under which pretext a good many men are injured who have not been guilty of any unprofessional conduct); and much is said about its watching over the behavior of its members and Fellows. It now remains to be seen what the College will do.

Some scandals occurred a few years ago in which a well-known medical baronet not only broke its rules, but actually snapped his fingers at the College afterwards, apparently with impunity. But then he was such a big fish! Now that the culprit is not quite such a whale, it will be curious to see how the old lady will proceed to deal with him. If he escapes without chiding, or, indeed, some more substantial mark of her wrath, then the rule about guaranteeing conduct had better have "obsolete" written across it, and all talk about "withholding the Fellowship for unprofessional conduct" be relegated to the charnel-house of the dead past, the only place for it in that case. One cannot but sympathize with the censors brought face to face with such an unpleasant affair. It is so delightfully easy to keep a man out of the sacred order if several of the august personages who rule the roost only choose to do so. But how about any energetic action when the culprit is in?

The College has held a meeting and decided "to take such steps as they think needful." The medical world looks on patiently to see what the needful steps are. Instead of action *in camera*, the censors must act in the open light of day, within the sight of the public. A subject of no little interest to the psychologist is thus afforded to him. It is to be devoutly hoped that the authorities will this time show the medical world that they can act upon occasion; for a more flagrant instance of insubordination can scarcely be required for them to do something. It is high time that the censors remember the dignity of the College and what is owing to public opinion, and to demonstrate to the world at large that its rules can be operative. The College has great capacity in petty matters. Perhaps it has more backbone than its mockers give it credit for. Sir William Jenner, the President, is a man who holds the chieftainship of the medical profession without a dissentient voice, and every one has the utmost confidence in him. But the President cannot transform all the elements of the College into men who dare act openly, and it is by no means absolutely certain that all the fifteen units of the Censors' Board can be elevated to his standard. It is certain—as certain as anything can be in a finite world—that this scandal will not improve the position of the profession in the eyes of those who hold it cheap,—a considerable section. It is equally certain that "the unfortunate manner in which the paper was put together" will be utilized by the anti-scientific portion of the public, known as the anti-vivisectionist party, to the utmost. The most will be made of the patient's allusion to "his wife and family," and of the symptoms which the sodium nitrite produced. A grand dish will be served up out of these materials, on which the party can feast sumptuously. And there is a large and comparatively compact body of the public who never miss an opportunity of decrying orthodox medicine. They are dissenters in religion, and radicals in politics. They hate meat and drink, are vegetarians and teetotallers. They speak of medicine as "allopathy," and have unbounded

faith in globules. They detest Jenner's discovery of the value of vaccination, which they hold at once to be useless as a protective against smallpox, and the vehicle for communicating disease. This active, mischievous body will seize upon the subject and gloat over it with an exquisite sense of enjoyment. Leicester will mock. Leicester has set its face against vaccination sternly, uncompromisingly; just as Keighley did some years ago, till a sharp outbreak of smallpox taught the natives a thing or two they either did not know or did not choose to acknowledge. Recently one of the infidels as to vaccination was sent to prison, and the people made him a martyr. When he emerged from the portals of his prison he was a hero who received a grand ovation, instead of a silly fellow who deserved all he had got. And now there is disorder and almost riot among the stocking-weavers, who, of course, only know what their leaders choose to tell them. As to the great facts, they shut their eyes to them. As to straining at the gnat and swallowing the camel, no Pharisee of old could give the anti-vaccinationists points. They see in vaccination a means of spreading disease, which is lucrative to the medical profession, who consequently uphold it. To all those and such like this affair will furnish grand matter for declamation and scorn. Knowledge may come to a stand-still; medicine may become as static and non-progressive as the pyramids of Egypt or the pillars of Baalbec. What care they? If they prefer smallpox to vaccination, why should they not in a free country? The right of private judgment is the great feature of Protestantism, and Leicester has advanced far beyond Protestantism. If they choose to have smallpox, why should they not? Certainly, and cultivate the malady till it becomes dangerous even to their vaccinated neighbors! But if your neighbor does not care about the risk, how then? Well, kick up a row till he thinks smallpox the lesser evil of the two. It is a solution of the difficulty, certainly.

In the North country there is a saying to this effect: "It takes one of all sorts to make a world." It certainly does. But an ignorant Leicester stocking-weaver howling for smallpox and abusing the medical profession is scarcely so sad a spectacle as that of one Fellow of the Royal College of Physicians stepping out under a pseudonyme to poniard a colleague in the dark. The profession whose "good name" this champion so chivalrously upheld had, indeed, better look to its custodians. If these Fellows of the College cannot act with a little more sense of propriety, some more care of what is due to a professional brother, the poor stocking-weaver may well point the finger of scorn at medicine. Let the College act with dignity, and then those whose conduct needs some guarantee in order to be decorous, if not decent, will go in real fear of it. Continence is not chastity. Virtue has a shifting value. One man may behave himself from self-respect, another only because he fears the penalty if he should fail. But when a man steps out of his way to stab a professional brother, not to say a colleague, then the offence is one which carries with it no extenuating circumstances. It is not a venial lapse; it is the commission of a sin. If the College cannot act in this case, then men who only behave well under the penalty will feel at liberty to act according to their inner promptings. A strong, vigorous action on the part of the College would reinstate it in the opinion of the profession, and possibly, too, in that of the public. Not that all shortcomings in the past should be atoned for by unmeasured severity in this particular instance: no reasonable person wishes that. What is to be desired is that the governing body will do something to show that its canons are not to be outraged with immunity from consequences. If unprofessional conduct has to be punished by withholding the Fellowship from offenders, surely such conduct in a Fellow ought to meet with appropriate recognition. If Fellows of the College are allowed to set a bad example unreproved, others will be tempted to follow; for it is desperately easy for a weak man to follow a bad example. The profession has its reputation to maintain, and may, apparently, thank its stars that it has not to make it. It looks as if it would take it all its time to uphold what others have won. What action the College will take in this emergency waits to be seen; but the eye of the world is upon it.

J. MILNER FOTHERGILL.

CHARLATAN.—The *Apotheker Zeitung* gives the origin of this word as follows: In the olden time, when the doctors, sitting in their studies, weighed the ills of their fellow-man, and searched the depths of nature for remedies, they were not in the habit of riding about; their homes were hospitals, and they did not leave their patients. At that time a genius of a doctor, who knew more about calculating for himself than medicine, made his appearance in Paris. His name was Latan. He procured a small one-horse wagon (*char*), upon which he packed his remedies for all possible affections. With these he drove through the streets of Paris, crying out his wares and looking for patients. He was the first driving doctor, and soon became renowned. Whenever he came along, the populace greeted him with, "Voilà le char de Latan." This was soon abbreviated to "Charlatan," which, at that time, denoted a driving doctor.—*Weekly Drug News.*

CODEINE PHOSPHATE has been prepared by Merck, at the suggestion of Prof. Hegar. It is soluble in four parts of water, and is suited for hypodermic injection.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, DECEMBER 6, 1883.

The PRESIDENT, R. A. CLEEMANN, M.D., in the chair.

DR. W. GOODELL exhibited

TWO CYSTS OF THE PAROVARIUM.

In commenting upon these specimens, he remarked that both patients got well; he, indeed, had never lost a patient from whom he had removed a parovarian cyst. In both cases, a correct diagnosis was made previous to the operation. One interesting diagnostic point was the complete absence of the *facies ovariana*. The color in the cheeks was good, and the countenance was free from the anxious expression present in cases of ovarian tumor. One tumor had existed for ten years, the other for one. Another important point in the differential diagnosis is not only the flaccidity of the tumor, but its variable degrees of flaccidity. Upon inspection, it is seen to reach to the sternum, and seems to occupy a large portion of the abdominal cavity, but, when the hands are placed upon its sternal edge, it can be compressed to the level of the umbilicus. An ovarian cyst, on the contrary, is hard and incompressible. Exceptions to this rule are very rare,—that is, either a tense parovarian cyst or a flaccid ovarian one. A third important distinguishing point is the long time—ten years in one case—which the tumor existed, and, further, without marked deterioration of health. After being tapped, these tumors usually refill, but occasionally they do not, and a cure is thus brought about. The fluid withdrawn has been in every case limpid, and generally colorless, but it has sometimes had in his experience an emerald tint. These tumors are generally free from serious adhesions, but if in an operation for the removal of one, adhesions should exist, where for any reason their forcible separation would be unadvisable, or the cyst were intra-ligamentous, he would not hesitate to leave the adherent portion of the cyst-wall, or the whole cyst itself, after making a big hole in it, as the fluid it secretes is bland and unirritating to the peritoneum.

Any one examining one of these cysts for the first time would consider it to be of ovarian origin; for it is only by patient search that the ovary can be found spread out over the cyst-wall. The microscope will decide with certainty in any otherwise doubtful case. The tumor is covered with a beautiful net-work of veins.

When a cyst of the parovarium exists on one side, the ovary of the opposite side is usually found to be diseased, and should be removed. In these cases, the remaining ovary was seen to be enlarged, and the site of a small ruptured cyst was pointed out. The Fallopian tube was also enlarged, and the terminal vesicle of the Fallopian tube, or the hydatid of Morgagni, was enlarged and cystic. This vesicle sometimes attains the size of an orange, and often ruptures spontaneously without any bad effects. A few years ago, one of these small cysts ruptured while he was making an examination of the patient to ascertain its character.

Dr. GOODELL exhibited a

CANCEROUS WOMB REMOVED PER VAGINAM.

In view of the very fatal statistics of the operation for the removal of the womb for the radical cure of uterine cancer, he had hesitated to perform it. In most of the cases where the disease had been seen early enough by him to give a chance of success, the patient had been unwilling to take the risk. On one occasion, when every preparation had been made to operate, the patient had a convulsion, and an examination of the urine showed a high proportion of albumen, in consequence of which he refused to operate. About a month ago, Dr. Charles A. Dulles called him in consultation to see a patient in whom the carcinomatous condition was limited to the anterior lip. The womb was movable. The case was put frankly before the patient, and all its dangers were pointed out. The choice of operations being given to her, she decided, after due consideration, to take the risks of the radical one. The operation was not as difficult as he anticipated.

The first step in the operation was to scrape away all cancerous tissue and to sear the remaining surface with Paquelin's cautery. The vagina was then thoroughly cleansed. A stout thread was passed through the cervix, to draw down the womb, instead of using a volsellum, the handles of which would be in the way. A circular incision was made around the cervix, and the tissues were stripped up anteriorly and posteriorly to the reflection of the peritoneum, and laterally to the insertion of the broad ligaments. Finally, the peritoneum was opened and the womb retroverted into the vagina by means of the obstetric crochet passed over the fundus. A strong thread was now passed through the body of the uterus, by means of which to manipulate it more easily. A ligature was now passed around the broad ligament of the right side and secured it *en masse*, and a second double ligature was passed through it and tied on opposite sides. This side of the broad ligament was then divided, the uterus drawn down, and the ligament of the left side secured in a similar manner and divided. The vaginal wound was closed and dressed with iodoform and cotton. A frank peritonitis set in on the third day, and proved fatal on the fourth. The result made him doubtful whether the

operation is a legitimate one; he, indeed, felt disposed to avoid it whenever possible.

Dr. E. E. MONTGOMERY inquired about the feasibility of using the galvanic-wire écraseur to divide the broad ligament, keeping the wire at a low red heat and dividing the tissues slowly, and avoiding the necessity for a drainage-tube. Another method which he had been revolving in his mind was by means of the galvanic knife to dissect out the uterus, leaving the peritoneum intact, thus imitating to a certain extent the operation of Dr. Marion Sims of scraping and the use of zinc chloride.

Dr. GOODELL thought that Dr. Montgomery's galvanic wire would get too hot as the loop became small, and would then divide rapidly like a knife, and incur the danger of secondary hemorrhage. He fears that the steam generated by the hot wire would penetrate the peritoneal cavity and have an irritating effect. He has a galvano-cautery battery, but has not used it since the introduction of Paquelin's benzoline cautery, as he finds the latter far more handy and manageable. He thinks Dr. Montgomery's suggestion of shelling out the uterus a very good one.

SPECIMENS FROM A CASE OF BATTEY'S OPERATION.

Dr. MONTGOMERY exhibited, through the courtesy of Dr. W. H. Warder, the uterine appendages which had been removed from a young lady for the relief of dysmenorrhœa which had resulted in physical and mental failure. Menstruation had commenced at the age of fourteen years, had always been painful, and had developed hysterical manifestations. Bathing at the sea-shore had at one time stopped the periods for three months; after this her health failed, her mind had been seriously affected for the last three years, and she would run away or do herself some violence at the menstrual periods if not closely watched.

Examination.—The uterus was enlarged and tender; there was profuse leucorrhœa. The os uteri was dilated, and the uterine cavity scraped and cauterized with carbolic acid, and bromides, etc., used internally, but no improvement resulted. The ovaries were removed to-day through abdominal section; catgut ligatures were used. The ovaries are very much enlarged, and contain small cysts. The abdominal wound was closed with silk sutures, and covered with an impervious dressing of collodion, cotton, etc.

HYSTERO-EPILEPSY AS A COMPLICATION OF PREGNANCY.

Dr. WILLIAM H. SHIPPS, of Bordentown, New Jersey, sent the following contribution:

Briefly defined, hystero-epilepsy is a term applied to an abnormal neurotic condition in which are manifested certain phenomena characteristic both of hysteria and of epilepsy. Out of two hundred and seventy-six patients confined at La Salpêtrière Hospital, Paris, under treatment for various nervous affections, thirty-two were diagnosticated by Beau, a careful observer, as suffering from this disease. Among this number the malady assumed either a distinct or a combined form: hence he very wisely groups the cases into two classes. In the first, the hysterical seizures and epileptic fits remain distinct one from the other; to this form he adapts the term given by Landouzy, and designates it as hystero-epilepsy with distinct crises.

In the second class, and the one of which this article furnishes an illustration, the hysterical and epileptic seizures are coeval, both developing at the same time: to this form the name of hystero-epilepsy with combined crises has been given. The object of this paper is not to enter into a consideration of the disease as it is met with in general practice, but simply to examine it as a complication of pregnancy, a stand-point from which, fortunately, we are rarely called to view it.

During the early part of March, 1883, I was called to attend a woman said to be in a fit. Arriving at the house, I found, lying on a bed, a young woman, apparently seventeen or eighteen years of age, of fairly-vigorous physique, who was striving against the united efforts of two or three neighbors who sought to prevent her doing herself bodily harm in the violence of her struggles. Examination showed entire loss of consciousness, eyes open and staring, pupils widely dilated, frothing at the mouth, which was then tightly closed, pulse full and bounding. Inquiry elicited that during the day she had been visiting a friend herself the subject of some spasmodic affection, and whilst in her company became greatly exercised on some trivial occurrence, and in this state of excitement returned home, which place she no sooner reached than she was seized with a convulsion. Her husband informed me that she was in the third month of pregnancy, and that prior to this morning she had on one or two occasions attacks somewhat similar, though of less severity. I at once injected hypodermically one-third grain of morphine, which in a short time was followed by a total disappearance of all spasmodic action, a state of stupor supervening, from which in the course of three or four hours she aroused apparently well as ever. On the day following I was called to see her, and found her in a state of high nervous excitement, sobbing, and deploring the presence of some impending danger which she, in her imagination, insisted was threatening her. In a short time the stage of muscular contraction, loss of consciousness, stupor, etc., took the place of the hysterical symptoms, finally terminating, as before, in a return to her normal condition.

Without attempting to follow the case step by step, taking in all its details, and noting the many and peculiar phases through which

it passed, it is interesting to note that prior to September 23, 1883, covering a period of two hundred days, not a day passed without the occurrence of one or more paroxysms. At times the hysterical phenomena would be most marked and usher in the attack; then, again, the epileptic fit would take the precedence, always, however, accompanied by the undeniable imprint of the dual disease hystero-epilepsy. In the inter-paroxysmal period she enjoyed for the most part average good health.

On the morning of September 23 I was asked to see her in an attack of more than usual gravity. When I reached the house, she was profoundly unconscious and had been so for several hours. The time for her approaching labor being near, I made a vaginal examination, but found no evidence of commencing uterine action. I ordered a hot mustard-bath, mustard to the extremities, and bromides the moment she should be able to swallow. In the evening, when I again called, her condition was apparently unchanged. I then ordered a blister to the nape of the neck, and left the patient, to return early in the morning. At 7 A.M. a messenger called, stating that the woman was now perfectly rational and to all appearance in labor. I at once responded, and found that she was having bearing-down pains of moderate intensity at intervals of five or ten minutes, mouth of womb dilating, vertex presenting. I remained by the woman's side until 3.45 P.M., when the child, a healthy female, weighing nine or ten pounds, was born. The labor did not differ from ordinary labors, except that it was only by the utmost vigilance that the woman was prevented falling into one of her accustomed attacks. After the birth of the child, I gave it to the mother, at the same time remarking to her that, as she valued the life of the child, under no circumstances was she to allow herself to have another convulsion. She promised faithful obedience, and up to the present has not shown the first indication of her old trouble. It should be mentioned that during the entire period the patient was under observation she had daily taken large doses of the bromides and other nervines without any effect, save, perhaps, in ameliorating the number and violence of the paroxysms. The case is interesting on account of the rarity of the disease as a complication of pregnancy, its persistence throughout the entire period, its resistance to all remedial measures, and the final disappearance of all symptoms after the termination of labor.

Two queries very naturally present themselves: What was the exciting cause of the attacks? Would the induction of premature labor in this and similar cases be justifiable?

In answer to the first query, I attribute the attacks to an action upon the brain and spinal cord, reflex in its nature and developed or excited by the fœtus in utero.

The happy termination of the case would seemingly offer a negative to the second query; but better judgment will, I think, suggest the wisdom of the operation, and the danger of refusing to employ what, theoretically at least, offers the only chance of relief: at all events, in a similar case I would most certainly have recourse to the operation and expect from it the best results.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held December 6, 1883, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Dr. T. GAILLARD THOMAS read a paper on

THE PREVENTION AND TREATMENT OF PUERPERAL SEPTICÆMIA.

The author's reason for preparing a paper on this subject was that since relating briefly the history of a case of puerperal septicæmia treated by intra-uterine injections at one of the societies within a comparatively recent period, he had received many inquiries concerning the mode of treatment, and also because the subject had not been fully elaborated in any single essay, and it was one which, in the light of our present knowledge of antiseptic methods, deserved special consideration. At the annual meeting of the American Gynæcological Society at Baltimore, Dr. Thomas stood alone, with a single exception, in the advocacy of intra-uterine antiseptic injections in puerperal septicæmia. He was one of the first who adopted the method, together with cutaneous refrigeration, in this affection. Dr. Thomas made brief reference to the different views entertained concerning the nature of puerperal fever,—those which considered it a fever due to suppression of the lochia, inflammation of the womb, of the peritoneum, a specific puerperal fever, uterine wounds, arrest of milk-formation, etc. The blood of the puerperal woman is favorable to the development of thrombi and of sepsis, the nervous system is in a state of excessive sensibility, and there are local conditions favoring the development of conditions classed as puerperal fever. The inner surface of the uterus, just after delivery, presents an unhealthy diphtheritic appearance, barring the exudation; there is an irregular, raw, placental site, with small clots covering the uterine sinuses, there is a disagreeable odor, and there are, perhaps, slight lacerations on the cervix, along the vagina, or at the outlet. The secretions along this canal, if inoculated into the finger, would produce irritation and lymphadenitis, but not erysipelas or angioleucitis. Notwithstanding this condition, recovery is almost universal after parturition. But now and then some poison enters through the lesions in the genital canal which act as rapidly and decidedly upon the general system as does a little yeast added to dough, and alarm-

ing phenomena develop, which, if left unchecked, lead to a fatal issue. The physician at his visit in the morning leaves the patient in a favorable condition, with a normal pulse and temperature, but returning a few hours later he finds her complaining of a slight chill, pelvic pain, the lochia have ceased, the milk-secretion is checked, and, as the symptoms proceed, the patient complains of headache, wears an expression of indescribable anxiety, the pulse runs up perhaps to 120, and the temperature to 103° or 104° F. If the physician contents himself with the idea that the patient is simply suffering from milk fever or with malarial symptoms, and does not recognize the fact that poison is being absorbed constantly into the general circulation from some solution of continuity in the genital tract, the active lymphatics will continue to take up the poison, lymphangitis develops, cellulitis, peritonitis perhaps, and all that group of conditions classed as puerperal fever, terminating in death.

As to the pathology of the condition, it is essentially puerperal septicæmia. It may assume the form of a phlebitis, cellulitis, lymphangitis, or a peritonitis, but the disorder is due to the absorption of poison into the circulation of the puerperal woman at some solution of continuity in the tract of the genital canal. As to nomenclature, he disapproved of the term "metria" proposed by the Dublin school of midwifery, considering it more objectionable than the term puerperal fever. Puerperal septicæmia, however, conveys a definite and clear conception of the true nature of the disorder, although in many respects it is far from being a satisfactory designation. As to the exact nature of the poison, German pathologists have tried to ascribe it to to the round-formed micrococci, but in such a paper as the present one the recent view of the nature of certain diseases as dependent upon bacteria could not, for evident reasons, be considered. But, admitting that some toxic agent may be the cause of the affection, we should inquire as to what are the best methods for preventing its entrance into the system, and, should it once gain entrance, study to know the best methods for counteracting its influence or destroying its activity.

There are two methods by which the poison could gain entrance to the genital tract,—namely, by the air, and by direct contact through the clothing of the hands of the surgeon or nurse, the sponges, instruments, etc. The author then directed his remarks specially to private practice, where, even in the wealthiest families, there is a carelessness shown which amounts almost to criminality. The greatest of care should be taken in every case of midwifery to guard against the entrance of septic poison into the circulation.

He enumerated the following prophylactic measures which it seemed to him should be adopted in every case of midwifery, whether in hospital or private practice.

1. The room in which the confinement is to take place should have the floor and the walls thoroughly washed with a solution of carbolic acid or of the bichloride of mercury. All cloths and towels should be washed in the same solution, and all curtains and drapery should be dispensed with.

2. The nurse and the physician should take care that all clothing, both under and outer, is free from any effluvia of septic affections, as of typhus, scarlet fever, erysipelas, and the like, and, if so exposed, they should change every article of clothing, and bathe the entire body, especially the hair and beard, with an antiseptic solution, as of boracic acid.

3. As labor comes on, the nurse should thoroughly wash her hands and cleanse the nails with a stiff brush. She should give a vaginal injection of an antiseptic solution every four hours during labor, and keep a cloth wrung out of the same solution over the vulva.

4. Both the physician and the nurse, before approaching the genital organs of the woman, should thoroughly wash the hands and nails with soap and water and soak the hands in a bichloride solution (one to one thousand).

5. The first two stages accomplished, the third stage should be efficiently produced. All portions of placenta and membranes should be removed, and ergot administered in moderate doses three times a day, and kept up for a week, in order to secure complete expulsion of clots and closure of the uterine sinuses.

6. The doctor should satisfy himself, without taking the word of the nurse, at the conclusion of labor, as to the exact condition of the genital tract, and, if he find a laceration of the perineum, close it by suture; and if slight solutions of continuity be found on the vulva and vagina, they should be dried with a cloth and touched with equal parts of persulphate of iron and a saturated solution of carbolic acid, again dried thoroughly with a cloth, and painted over with gutta-percha collodion. In this way absorption would be prevented for three or four days, when the application could readily be repeated.

7. Six or eight hours after labor, the patient having become rested, the vagina should be syringed out with an antiseptic solution, and a suppository of cacao-butter, containing from three to five grains of iodoform, be introduced.

8. The vaginal injections and suppositories should, in all cases of normal labor, be repeated every eight hours, and, in cases of difficult or instrumental labor, twice as often, and should be kept up at least ten days; the nurse observing the precaution already mentioned,—to wash the hands in a disinfectant solution before every approach to the genital tract of the patient.

9. When the use of a catheter becomes necessary, the physician should employ a gum-elastic catheter, which should, before use, be thoroughly immersed in the antiseptic solution. The nurse should not be allowed to employ an old silver catheter which she has probably carried about for several years.

10. Last, but by no means least, let the physician inform himself, by personal observation, as to the competency of the nurse to syringe out the vagina thoroughly and to place the antiseptic suppositories just where they should be placed, and to use the catheter without injury to the patient. By neglecting these precautions there might be failure to wash out the upper segment of the vagina while the lower was thoroughly washed. The trouble involved in this plan would not be at all great, when measured with the comfort given the mind of the physician from a feeling that he had done his whole duty. Every woman in confinement ought to be treated as though she were going through a capital operation, and, if the rules laid down were conscientiously observed, many households would probably be saved the sorrow of losing their female heads.

With regard to the use of intra-uterine injections as a prophylactic resource, Dr. Thomas said that it could not be approved of, except in very severe operations within the uterine cavity, which render the occurrence of septicæmia almost certain. As a preventive measure to be uniformly adopted, he looked upon it as in the highest degree rash and reprehensible.

Supposing that the poison has entered the system, what are the best means now known for stopping the septic process?

First. As soon as a diagnosis of septicæmia is determined upon, all pain and nervous perturbation should be checked, and mental anxiety should be quieted by the hypodermic administration of Magendie's solution of morphine, unless some special idiosyncrasy against opium exist; and during the entire attack, whenever suffering of body or mind occurs, it should be repeated; perhaps once in six or eight hours would prove sufficiently often. No other method can compare with the hypodermic in these cases. If a sharp and new needle be used, and thoroughly cleansed with soap and water and dipped in the bichloride solution each time of use, no abscesses will occur.

2. The patient having been entirely relieved of pain, the nurse should quietly, without any hurry, noise, or disturbance, spread an oil-cloth over the edge of the bed, made to fall into a tub of warm water rendered antiseptic by a two or two-and-a-half per cent. solution of carbolic acid, or the bichloride solution, one to two thousand. Then a Chamberlain's glass tube, the perforations confined principally to the end, or Lyman's tube, should be fitted to a Davidson's syringe, immersed in the tub of water, the tube conducted carefully through the vulva up to the fundus of the uterus, with the index finger as a guide, and a stream of water be made to flow against the uterine wall, washing away the blood-clots or other foreign material that may be present. In some cases, in which there was reason to suspect the presence of portions of membranes, the patient had been chloroformed, and the hand passed carefully into the uterus and the walls very gently curetted by the nails. In some cases, the walls might be rubbed down with a sponge.

The dangers of the method are, first, the introduction of air into the uterine sinuses; secondly, the production of hemorrhage by detaching thrombi, which fill the mouths of the uterine sinuses; thirdly, the forcing of some of the fluid directly into the circulation; fourthly, the production of grave convulsions by the sudden and powerful influence upon the nervous system; and, fifthly, the passage of fluid through the Fallopian tubes. But all these dangers may be avoided by care as to details, and the use of a large tube, and of water of not less than 100° F. The tube should not quite fill the os internum or externum and exclude the exit of the water. If necessary, dilate by the finger or Barnes's dilator. Have a solution of persulphate of iron always at hand, in case of sudden hemorrhage; and he further advised, in case hemorrhage should occur, to give ergot, make pressure so as to cause contraction of the uterus, etc.

The frequency of the intra-uterine injections will vary greatly in different cases. In a mild case, in which the temperature readily comes down, it might be necessary to use the injection only once every five hours, in other cases every three hours, and in bad cases every hour. The injections should always be administered by the physician, and always be carried fully up to the fundus of the uterus. Many prefer the use of a syringe which carries a steady stream by gravitation, as the so-called fountain-syringe, and such, formerly, was the author's preference; but he had since learned that, with care, the stream can be projected with gentle force without danger, and more effectually bring away any clots and material that may be present in the cavity of the uterus. Some prefer continuous irrigation, but he looks upon it as a delusion and a snare. For vaginal irrigation, however, it is an excellent method. Nevertheless, in very severe cases, he prefers the continuous flow with the intermittent current, used every three hours, rather than to subject the patient to the use of the intermittent current as often as it would otherwise seem necessary.

3. The uterus having been thoroughly cleansed, and the patient entirely quieted, attention should be turned towards controlling the temperature. Formerly he had relied on

cold or tepid water, the patient lying on Kibbie's cot; but at present he accomplishes the same result more easily and pleasantly by the use of Townsend's rubber-tube coil, which covers the whole of the abdomen from the ensiform cartilage to the symphysis pubis, through which a stream of cold water passes by means of siphon-pressure, the vessel of supply being about three feet above the level of the patient, and the receiving-vessel being upon the floor. By this means a temperature of 104° could be brought down and kept at 100° F. without difficulty. In his service at the Women's Hospital the rubber coil is as commonly in use in cases of laparotomy as gargles are in sore throat. Sometimes the temperature would not go down inside of twenty-four hours. He had never seen any evil result from the use of the coil.

4. The nervous system should be placed under the influence of febrifuge medicines, as of quinine, or capsules of Warburg's tincture as recommended by Dr. Metcalfe, or salicylate of soda.

5. The patient should receive fluid food frequently repeated, milk being the staple article, and animal broths for a change.

6. The attendant should surround himself with abundant and efficient assistance. The physician should associate with himself some young practitioner who can use the douche safely and efficiently, and there should be at least two nurses, the one to relieve the other.

The antiseptics which had been employed were thymol, boracic acid, salicylic acid, carbolic acid, and mercurial bichloride. Of these all others had disappeared under the superior excellence of the last two, and carbolic acid appeared to be about to be abolished for the bichloride in the strength of one part to one or two thousand. If carbolic acid be used, it is not safe to carry the strength beyond two or two and a half per cent.

DISCUSSION.

Dr. W. M. POLK, having been requested to open the discussion, said that he believed that he uttered the thought of every member of the Academy when he said that they were deeply indebted to Dr. Thomas for the able and even eloquent presentation of this most important subject. The author had gone into the subject so thoroughly that there seemed but little left to say, especially with reference to treatment. He thought that perhaps it would have been better, in view of the stress which Dr. Thomas had placed upon antiseptic treatment, which most would of course accept, had he placed himself more squarely upon that pathological view which regards puerperal fever as identical with septicæmia and pyæmia. So long as there is any question on this point will there be doubt in the minds of many with regard to the propriety of many measures advocated by Dr. Thomas. Dr. Polk regarded the disease, as the question at present stood, as identical with septicæmia and pyæmia. The difference in the symptoms was merely that that belonged to the peculiar tissue involved and peculiar condition of the circulatory fluids. As to treatment, standing as he did upon this basis of septicæmia and pyæmia, it seemed to him that the principles of Listerism, as laid down by Mr. Lister and his followers, and so ably advocated by Dr. Thomas to-night, entirely covered the ground. As to precautionary measures, there was absolutely nothing to add, unless it were that attention should be paid to the purity of the atmosphere, especially in this city. Regarding active treatment, he would simply say that oftentimes, in his experience, he found himself making use of intra-uterine injections when in reality the sole lesion which was killing the patient was to be found in the cervix. This was found in a sloughing condition, and the weight of the fluid failed to separate the lips properly and effect cleansing. He therefore now makes a careful examination of the vaginal canal, introduces the Sims speculum, draws down the cervix with the tenaculum, and, if he finds any lesion, applies directly to the spot a strong solution of carbolic acid or other disinfectant; in many cases this is the only treatment which seems necessary. He had sometimes introduced Skene's blunt curette and removed, with great gentleness, any remaining membranes from the uterine cavity.

Dr. J. B. HUNTER had experienced the difficulties of making intra-uterine injections, and thought it should never be intrusted to a nurse. It should be done with the greatest gentleness and with the least disturbance to the patient, and he believes it unnecessary to lift the patient to the edge of the bed at all, but to use a large bed-pan and make the injections while she lies on the back. The Chamberlain tube is usually too large, especially after the first few injections, as the cervix then contracts more or less. The perforations should not extend down upon the instrument, else all the fluid may escape into the lower portion of the canal. There is apt to be more objection against the proposed methods on the part of friends and the nurses than on the part of the patient. He uses water of a temperature of 110° F. The bodily temperature should be a guide as to the frequency of the injections. He did not approve of the coil in cases of puerperal fever, for the temperature might thus be reduced while septic material was still being absorbed, and thus mislead the physician. The coil, however, is a most excellent instrument in peritonitis after laparotomy.

Dr. E. L. PARTRIDGE thought that there could not be much difference of opinion in the minds of those who had seen much obstetric practice concerning the pathology of the condition. He would lay special impor-

tance upon personal cleanliness on the part of the physician and nurse, as prophylactic measures. As to the management of puerperal septicæmia, he made use of intra-uterine injections with the same frequency recommended by Dr. Thomas and others. With reference to agents employed, he would only speak of a supplementary measure to the intra-uterine injection introduced by the late Dr. Livingston at the Nursery and Child's Hospital; that is, the injection of a mixture of iodoform and glycerin after the douche.

This measure seemed to render the necessity for the douche less frequent. He recognized the value of the bichloride solution, and also that of the coil in cases of puerperal septicæmia, for the purpose of reducing temperature. Its first application had produced no greater discomfort than the first rectal injection.

THE PRESIDENT said that, on account of the lateness of the hour, it would be impossible for all the gentlemen prominent in this specialty to take part in the discussion, and, as the opinion of all should, as far as possible, be obtained, he would suggest that the first meeting in February be appointed as the time for the special consideration of the subject of the paper, and he would beg to be allowed to open the discussion on that occasion. Some years ago he had given expression to views on this subject which were not in accord with those of any of the gentlemen present on that occasion, but which, he believed, were the views entertained by many prominent gentlemen throughout the world at the present day. He should agree with the author of the paper as to the description given of puerperal fever, but as to the sum total of the conditions which went to make up the pathology he should differ, and also with reference to certain matters in treatment.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held December 12, 1883, GEORGE F. SHRADY, M.D., President, in the chair.

ANOMALIES IN THE DEVELOPMENT OF THE LIVER.

Dr. FERGUSON presented some specimens of anomalous development of the liver, the most important form, probably, being that in which the right lobe attained an unusual size, reaching down to the crest of the ilium, club-shaped, and constituting an apparent abnormal tumor, liable to mislead the diagnostician. Moreover, it might cause difficulty by pressure upon the colon and ureter, interfering with the function of these organs. The left lobe was likely to be small in size.

The second in importance was that form of anomaly in which the left lobe was largely increased in size, while the right was likely to be diminished. This form also was liable to mislead the diagnostician, who might suppose that he had to deal with a new growth.

The next form was that in which but one lobe of the liver was present. Dr. Ferguson had seen but a single specimen of this description. In it the liver was almost a complete hemisphere.

The next form was that in which the liver was composed of one large lobe with a few—perhaps four—small nodules on its under-surface.

Still another form of anomaly was that in which the liver, consisting of one large lobe, was cut up by a large number of grooves, as it were, constituting numerous small nodules. One of the specimens presented probably contained as many as thirty-five or forty of these small nodules. It was to be remarked that the specimens mentioned were normal, or nearly normal, in structure, and that the anomalous form was not due to disease.

Dr. Ferguson also presented specimens removed from a patient with the following history. The patient, houseworker, was 22 years of age, married, who entered the hospital on the 27th of November, 1883. A few hours previous to admission she had been suddenly seized with acute pain in the chest, dyspnœa, and vomiting. She had for some time before been in a hospital and treated for dropsy. On admission, the face was cyanosed, there was severe pain in the chest, there was a loud blowing murmur over the base of the heart, dyspnœa, rapid respiration. The urine contained albumen. The temperature was not at any time very high. Death took place inside of twenty-four hours. Autopsy showed œdema of the legs below the knees, twelve ounces of serum in the peritoneum, no evidence of peritonitis, a few ounces of fluid in the pleural sac, extensive vegetations on the mitral valve, dilatation of the corresponding ventricle and auricle, lungs intensely œdematous and congested, fatty degeneration of the liver; enlarged, congested, and pigmented spleen; left kidney slightly larger than normal, the right much atrophied; the ovaries displaced and fixed by adhesions; the Fallopian tubes contained purulent fluid, the right about two ounces and the left a smaller quantity. Microscopical examination showed ciliated and columnar epithelium, pathological properties which Dr. Ferguson had never witnessed in any other form of abdominal cyst.

Dr. GARRISH asked Dr. Ferguson if, out of the thousand autopsies which he had made, he had found any case of cirrhosis of the liver in which there was absence of an alcoholic history.

Dr. FERGUSON said that the question was a very difficult one to answer, for the reason that it was almost impossible to get a straight history regarding alcoholic beverages; he thought, however, that he had seen at least

two or three cases of cirrhosis of the liver in which there was positively no alcoholic history.

Dr. CARPENTER remarked that it was an accepted fact that cirrhosis of the liver might occur aside from alcohol as a cause.

DERMOID CYST DISCHARGING INTO THE PELVIS OF THE KIDNEY.

Dr. CHARLES HEITZMAN presented a specimen of urine, which was brought to him about a year ago by a physician in the central part of the State, who stated that the woman who passed it was about 50 years of age, and was in the habit of passing urine containing a large amount of whitish threads, every two to four weeks, under excruciating pain. The specimen brought to Dr. Heitzman had a glassy, shining appearance, contained floccules, and, under the microscope, showed the characteristic properties of a dermoid cyst,—horny, dry epithelial substance, and crystals of urate of soda in sheath-form. Dr. Heitzman diagnosed a dermoid cyst which at certain periods discharged its contents into the pelvis of the kidney, and advised an operation. He heard nothing more of the case until recently, when the physician wrote him that the patient had continued to pass urine of a similar appearance under similar conditions about once in two or three weeks; that she was otherwise in good health, excepting laryngitis.

REMOVAL OF ENLARGED THYROID GLAND BY ELASTIC LIGATURE.

Dr. J. A. WYETH presented a part of the isthmus of an enlarged thyroid gland which had been successfully removed by the elastic ligature after failure, resulting in hemorrhage, with the ordinary ligature.

ANGIOMA OF THE VOCAL CORD.

Dr. LOUIS ELSBERG presented the specimen, which had recently been removed from a man, 28 years of age, a vocal teacher, formerly a lecturer. The tumor was situated on the right vocal band, near the anterior commissure, and, in the mirror, appeared the size of a large pea. Under the microscope it presented the characteristics of an angiomatous tumor. Such tumors were frequently met with in the skin, but this was about the tenth occurring in the larynx which had been recorded in literature. He himself had presented another to the Society about three years ago. They usually occurred on the right vocal band.

PUERPERAL TETANUS.—A case of fatal puerperal tetanus, occurring at the Lying-In Hospital in Prague, is reported in the *St. Louis Courier of Medicine* for December. The tetanus began a week after delivery, and terminated in death five days later. The autopsy showed metritis and pachymeningitis spinalis et cerebri.

GLEANINGS FROM EXCHANGES.

PHARMACY, THERAPEUTICS, AND COLLECTIVE INVESTIGATION OF DISEASE.—At a recent meeting of the Alumni Association of the Philadelphia College of Pharmacy, F. E. Stewart, M.D., Ph. G., read an essay entitled "The Relation of Pharmacy to Therapeutics," in which the interests of the physician and the pharmacist were both shown to be opposed by the proprietary-medicine trade; and it was claimed that the true interests of science demanded the discontinuance of the use of secret remedies by the public. Both pharmacy and therapeutics would be gainers by such a course. In conclusion, the lecturer advocated, for the advancement of science, a collective investigation of the materia medica of the world by the United States government, by founding at Washington a government laboratory provided with sufficient men, apparatus, and means for doing scientific work on drugs. Each department of the knowledge of drugs should be represented. There should be departments of botany, agriculture, history, chemistry, microscopy, toxicology, pharmacy, physiology, and therapeutics: a department of botany, to identify and properly classify medicinal plants; of agriculture, to study their cultivation; of history, to compare them with each other with regard to their relative importance as remedial agents; of chemistry, to investigate their active principles, and to learn the best methods for their extraction; of microscopy, to determine their structure, and for the purpose of identifying drugs and preventing their adulteration and substitution; of toxicology, to investigate their properties as poisons, and to ascertain their antidotes; of pharmacy, to prepare them aright; of physiology, to determine their actions on animals for the purpose of studying physiological therapeutics; and of therapeutics, to send them out for clinical test in the hands of the profession, guided by the knowledge already collected by the laboratory.

This work should include both old and new drugs. Our knowledge concerning some of the oldest drugs in the materia medica is but limited, and much of the information that exists in the text-books is trashy as far as therapeutics is concerned. It needs a thorough sifting and revision, after careful experiment is made to prove what is true, and to separate the wheat from the chaff.

When a new drug is discovered that seems to bid fair to be of value as a therapeutic agent, let it first be tested physiologically on animals, and, if it prove to possess activity, let it be submitted to chemical analysis. Then let it be prepared in the best form for administration, and sent to the hospital service of the country, and to the medical profession at large, so that its virtues may be tested clinically. That the medical profession may be

well informed with regard to the drug, so that they can make such tests in an intelligent manner, let "working bulletins" be prepared, giving, briefly, the state of existing knowledge concerning the drug after it leaves the investigation of the laboratory. Accompany the bulletin with a list of questions stating what it is desirable to ascertain about the drug, requesting answers from the profession. When sufficient information is thus obtained to justify its compilation, let it be collected and classified in the forms of science, and published for the benefit of science. Thus would be founded a scientific pharmacological literature, progress in the knowledge of drugs would be promoted, the position of both professions improved, and the cause of suffering humanity greatly benefited.

"There is at Washington an institution known as the Smithsonian Institution. Its founding is due to that great lover of science, James Smithson. Its object is the increase and diffusion of knowledge among men. This institution is devoted to scientific work. It is well provided with money, elegant buildings, a fine library, an excellent laboratory, and a corps of scientific men. The work of the United States Fish Commission, National Museum, and scientific research in other departments of science are too well known for comment here. It is suggested that there be added to this institution a laboratory of experimental pharmacology for the purpose described.

"To sum up, therefore, pharmacy and therapeutics are but branches of the science of drugs, and dependent upon the materia medica. The science of drugs is properly called pharmacology. Pharmacology is a department of the science of medicine. The pharmacist and physician are both votaries of medical science, though interested in different branches. To prepare medicine aright, pharmacy must conform to therapeutic usage, and the physician is dependent upon the pharmacist for such preparation. In the study of the materia medica both professions meet, and in favoring the progress of pharmacology their interests are mutual."

After discussing this paper, it was voted that it is the sense of the meeting that this suggestion be adopted, and the founding of such a laboratory at Washington in connection with the Smithsonian be recommended.

St. John Long's Liniment.—This old-time liniment is still in use at the Pennsylvania Hospital, in this city, for stiff and rheumatic joints, and in general for cases in which a local stimulant and rubefacient effect is desired. Mr. Jacob Hecker, Ph.G., the apothecary of the institution, uses the following formula:

℞ Vitelli ovi, no. viij;
Olei terebinthinæ, f℥xxiv;
Acidi acetici, f℥xvj;
Aquæ, f℥xxiv. M.

The directions for its preparation are as follows. To the yelks, in a gallon-bottle, add a small quantity of the water, and shake briskly together; then add the turpentine in successive portions, shaking the mixture briskly after each addition; then add the acetic acid, and lastly the water, in the same manner. For private practice the liniment is greatly improved by the addition of one drachm of good oil of lemon to each pint.

MISCELLANY.

A Philadelphia Neurological Association.—A preliminary meeting of physicians interested in the study of nervous diseases and psychiatry was held at the hall of the College of Physicians on Saturday evening, the 15th instant, at which Dr. Kerlin presided. It was well attended, and much interest was shown by those present. A series of resolutions was adopted, declaring the intention of those present to meet early next month for the permanent organization of a society for the study of neurological science in all its departments, consisting of physicians of Philadelphia and vicinity. Drs. Charles K. Mills, Wharton Sinkler, R. H. Chase, J. T. Eskridge, and A. P. Brubaker were appointed a committee on Permanent Organization, the society to meet at the call of the chairman of this committee, for organization.

The following were present at the meeting: Drs. C. K. Mills, Wharton Sinkler, Francis Dercum, J. T. Eskridge, James Hendrie Lloyd, Nathan A. Randolph, Edward T. Reichert, A. P. Brubaker, Lambert Ott, Max Bochroch, Lewis Brinton, William M. Angney, S. Preston Jones, D. D. Richardson, Emily P. Avery, J. N. Kerlin, Robert A. Given, R. H. Chase, Alice Bennett, and George Moorehouse.

Those present indicated their intention of co-operating in the movement, and letters of approbation were received from other neurologists and alienists who could not be present.

Death from Phosphorus-Poisoning.—The death of a girl, aged 2½ years, is reported from Lenzie, Scotland, and everything points to its being a case of poisoning from sucking the phosphorus off matches. Some days previously she had been playing with a box of matches, and it was observed that the phosphorus had been sucked off several of them. Symptoms of poisoning showed themselves a few days afterwards, and she died in considerable suffering, after a short illness.—*British Medical Journal.*

Iodoform and Calomel.—As this combination is often ordered by specialists as a dusting-powder, it may be of interest to know that the ingredients are, to a certain extent, incompatible. S. J. Bendiner, in a communication read before the New York College of

Pharmacy, recently, stated that iodoform and calomel are decomposed by light at an ordinary temperature, such decomposition taking place as well by exclusion of the chemical rays. Consequently, these substances rubbed together can only be safely dispensed in black glass bottles.—*Druggist and Chemist.*

DR. WILLIAM THOMSON has changed his residence from No. 1502 Locust Street to No. 1426 Walnut Street, Philadelphia.

NOTES AND QUERIES.

THOMAS STORY KIRKBRIDE, M.D.

A severe attack of pneumonia, which Dr. Kirkbride suffered last March, produced a condition of debility which finally led to his death on December 17, at the hospital to which he had devoted the best powers of his life, and which remains an enduring monument to his faithfulness and skill.

Thomas Story Kirkbride was a native of Pennsylvania; he was born near Mooresville, Bucks county, July 31, 1809. His ancestors were members of the Society of Friends, and were among the early settlers of the State. His academical education was acquired at Trenton and Burlington; his medical studies were inaugurated under the direction of Dr. N. Belleville, of Trenton, and continued at the University of Pennsylvania, where he received his degree in March, 1832. After a year's service as interne in the Friends' Asylum for the Insane at Frankford, he entered the hospital with which his whole future was to be identified, in March, 1833, as resident physician. At this time all of the departments were located at Eighth and Spruce Streets, Philadelphia. Having served a term of two years, he engaged in private practice for the next five years, during which period he also served for a time as physician to the House of Refuge, to the Institution for the Blind, to the Magdalen Asylum, and other public institutions. At this time, the managers of the Pennsylvania Hospital having secured a large piece of ground on Haverford Road, west of Forty-Second Street, in West Philadelphia, and having erected upon it a special building for the accommodation of insane persons, Dr. Kirkbride was tendered the position of superintendent, which he accepted. The new hospital was opened January 1, 1841, and the new superintendent at once entered upon the duties which ceased only with his death.

Under Dr. Kirkbride's able and attentive administration the new hospital became so popular and he became so identified with its success that for many years it was better known to the public by his name than by its proper title. In 1854 he urged upon the Board of Managers the necessity of increased accommodations, and recommended the erection of an additional building, which would permit entire separation of the sexes. His carefully-prepared plans for the new building were adopted, and the entire amount (over $355,000) required for its erection and furnishing was obtained by private contributions. The new building, which is now known as the female department, had an equal capacity with the former one,—of two hundred and fifty patients. Since October 27, 1859, when this department was formally opened for the reception of patients, Dr. Kirkbride has continued to reside in it with his family.

The reputation of Dr. Kirkbride rests chiefly upon his ability as an executive officer, and upon his humane methods of treating cases of mental disease. Under his able direction the Insane Department of the Pennsylvania Hospital has obtained a celebrity that may justly be said to be limited only by the bounds of civilization. His contributions to literature were chiefly in connection with subjects of hospital construction and administration. In addition to his valuable series of annual reports to the Board of Managers for the last forty-one years, he published a work on "The Construction, Organization, and General Arrangement of Hospitals for the Insane," and a number of minor monographs, among which are "Rules and Regulations for Hospitals for the Insane," and "Rules for the Government of those Employed in the Care of the Insane," besides some contributions to current medical literature.

One of the originators of the Association of Medical Superintendents of American Institutions for the Insane, he served the organization for nine years as its president, thus showing the high esteem in which he was held by his colleagues. He was an honorary member of the Psychological Association of England, a Fellow of the Philadelphia College of Physicians, and he also belonged to several other medical and scientific organizations, including the American Philosophical Society. He was a manager of the Institution for the Blind in this city from the time of its foundation.

Dr. Kirkbride was a true gentleman; modest, courteous, refined by nature, the secret of his successful career was one of patient continuance in well-doing, his genius that of accomplishment. He probably never had robust health, but, in reviewing his work, it looks titanic in comparison with his weak physical frame. The world may, or may not, know its greatest men; but it certainly requires more than usual discrimination to appreciate those elements of character which are the foundation of true greatness.

WILLIAM H. HOOPER, M.D.

Dr. William H. Hooper died, December 18, at his home in this city, from a complication of diseases. He had suffered during the yellow fever at its last visitation here, and during the last few years of his life was a sufferer from severe hepatic disorder. Born in Worcester County, Maryland, August 7, 1824, he came to Philadelphia before his twelfth year, and obtained his academical education at the University of Pennsylvania, where he received his degree of A.M. in 1845, and subsequently he was graduated in the Medical Department in March, 1848. With the exception of eighteen months' study in Paris hospitals, he devoted himself to private practice and with marked success. He was a member of the Philadelphia College of Physicians and other Societies. He received the nomination for coroner on the Democratic ticket last September, but failed of election; this disappointment probably hastened his death.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 8 TO DECEMBER 22, 1883.

CAMPBELL, JOHN, LIEUTENANT-COLONEL AND SURGEON.—Having completed the duties pertaining to the office of the Medical Director of the late Department of the South, to proceed from Newport Barracks, Kentucky, to New York City, and assume the duties of attending surgeon in that city. Paragraph 12, S. O. 284, December 12, 1883.

CLEMENTS, BENNETT A., MAJOR AND SURGEON.—Relieved from duty as attending surgeon New York City, and detailed as member of Army Medical Examining Board, now in session in New York City. Paragraph 12, S. O. 284, A. G. O., December 12, 1883.

MCKEE, J. C., MAJOR AND SURGEON.—Assigned to duty as Medical Director Department of the Columbia. G. O. 31, Department of the Columbia, December 3, 1883.

SHUFELDT, ROBERT W., CAPTAIN AND ASSISTANT-SURGEON.—Now on sick-leave, relieved from duty in the Department of the East, and assigned to temporary duty in the office of the Surgeon-General of the Army. Paragraph 12, S. O. 284, A. G. O., December 12, 1883.

WILLIAMS, JOHN W., MAJOR AND SURGEON.—Leave of absence on surgeon's certificate of disability granted in S. O. 157, November 12, 1883, Department of the Columbia, extended five months on surgeon's certificate of disability. Parograph 6, S. O. 286, A. G. O., December 14, 1883.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY FROM DECEMBER 8 TO DECEMBER 22, 1883.

Assistant Surgeon L. W. CURTIS detached from the "Adams," and ordered to the coast-survey steamer "McArthur."

P. A. Surgeon F. C. DALE detached from the coast-survey steamer "McArthur," and ordered to the U.S. steamship "Adams," at Sitka, Alaska.

Surgeon F. M. DEARBORNE placed on the retired list from December 10.

P. A. Surgeon A. C. HEFFINGER, in addition to his duties at the Navy-Yard, ordered to attend officers at Portsmouth, New Hampshire.

P. A. Surgeon C. T. HIBBETT detached form the "Onward," and ordered home.

Surgeon J. W. Ross detached from the U.S. steam-ship "Iroquois," and ordered to the U.S. steam-ship "Onward," at Callao, Peru.